CH-X1200

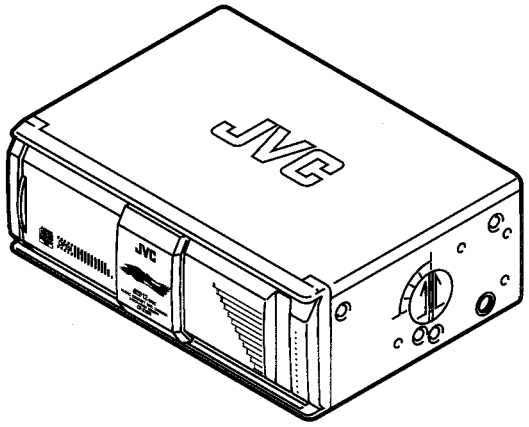
JVC

SERVICE MANUAL

COMPACT DISC AUTOMATIC CHANGER

CH-X1200

COMPACT disc DIGITAL AUDIO TEXT



Area suffix

E.....Continental Europe
J..... U.S.A.
U.....other areas

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No.49476
Aug. 1998

Safety Precautions

J (USA) Only
Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER: Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION: Do not open the bottom cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
4. CAUTION: The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when unloading cartridge and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION: Use of controls of adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
6. CAUTION: The laser is able to function, if safety switches are out of function. The laser light is invisible, avoid exposure, do not disassemble the laser unit, but replace the complete unit.

B/E/G Only
Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER: Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION: Do not open the bottom cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
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5. CAUTION: Use of controls of adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

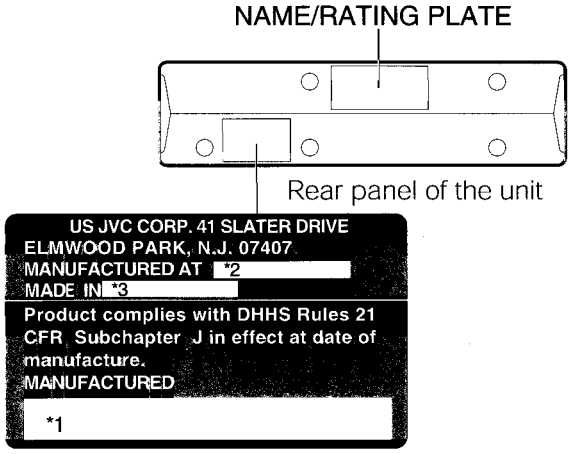
ADVERSEL: Usynling laserstråling ved åbning. når sik-kerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

VAROITUS: Varmuuskytkimen oliessa pois päältä kun laite avataan, siellä kehittyy näkymätöbtä. Älä pane itseäsi säteilyn altiiksi.

VARNING: Osynling laserståining uppstår vid komponentens öppning när säkerhetsbrytaren äe frånslagen.

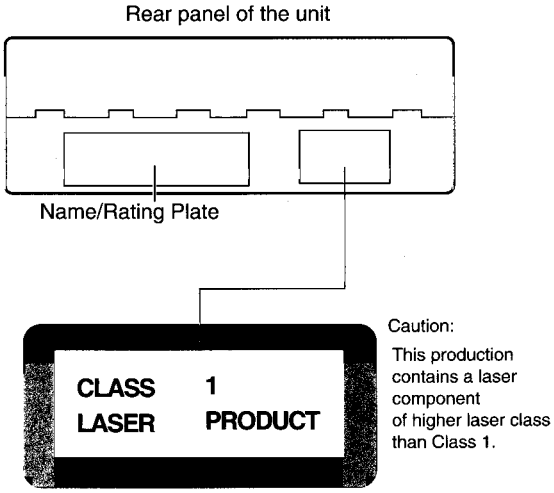
ADVARSEL: Usynling laserstråling ved åpning når sik-kerhetsbryteren er ude af funktion Unngå utsettelse for stråling.

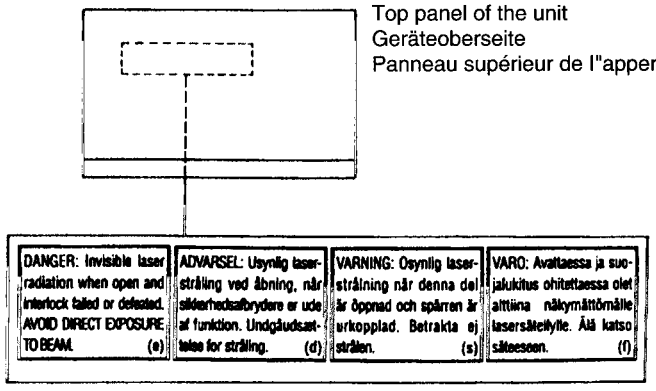
Identification And Certification Labels


NAME/RATING PLATE
Rear panel of the unit
US JVC CORP. 41 SLATER DRIVE
ELMWOOD PARK, N.J. 07407
MANUFACTURED AT *2
MADE IN *3
Product complies with DHHS Rules 21 CFR Subchapter J in effect at date of manufacture.
MANUFACTURED
*1

Notes
*1 The date of manufacture.
*2 The ID code of manufacturing plant.
*3 Marking of country origin.

Position And Reproduction Of Labels

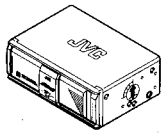

Rear panel of the unit
Name/Rating Plate
CLASS 1
LASER PRODUCT
Caution:
This production contains a laser component of higher laser class than Class 1.


Top panel of the unit
Geräteoberseite
Panneau supérieur de l"appereil
DANGER: Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)
ADVARSEL: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgåudsættelse for stråling. (d)
VARNING: Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen. (s)
VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)

JVC CH-X1200

CD CHANGER
CAMBIADOR CD
CHANGEUR CD
Instructions
Manual de instrucciones
Manuel d'instructions

LVT0128-001A
[J]



Printed in Japan
0698MNMMDWOZK
EN, SP, FR

ENGLISH

Thank you for purchasing this JVC product. Please read these instructions carefully before starting operation to be sure to obtain optimum performance and a longer service life from the unit.

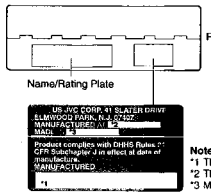
For U.S.A. only

INFORMATION
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IMPORTANT FOR LASER PRODUCTS

PRECAUTIONS
1. CLASS 1 LASER PRODUCT
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the top cover. There are no user serviceable parts inside the unit, leave all servicing to qualified service personnel.
4. **CAUTION:** The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when unloading the CD magazine and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. **CAUTION:** Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Identification And Certification Labels



Notes:
*1 The date of manufacture.
*2 The ID code of manufacturing plant.
*3 Marking of country origin.

For Customer Use:
Enter below the Model No. and Serial No. which are located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No. _____

Serial No. _____

WARNING

- This unit is designed to operate with 12 volts DC, NEGATIVE ground electrical systems.
- When replacing the fuse, use one with the specified rating for this unit. If the fuse blows frequently, consult your nearest JVC car audio dealer.

PRECAUTIONS

- **Car's Internal Temperature**
  Before listening to CDs after your car has been parked for some time in low or high temperatures, wait until the temperature inside the car stabilizes.
- **Condensation**
  In the following cases, moisture may condense on the lens, a critical part of the CD player, making the CD signal unreadable:
  – When a heater has just been turned on.
  – When the humidity is high.
  In these cases, unload the CD magazine and wait for 1 or 2 hours.
- **Volume Setting**
  – CDs produce very little noise compared with analog sources. If the volume level is adjusted for these sources, the speakers may be damaged by the sudden increase in the output level. Therefore, lower the volume before operation and adjust it as required during playback.
  – Adjust the volume so that you can hear sounds outside the car.

Mistracking
Mistracking may occur when driving on an extremely rough road. The unit and compact disc will not be damaged by mistracking, however, since it is offensive to the ear, stop playback and restart when you reach a road that's in good condition.

INSTALLATION

- **Avoid installing the unit in the following places**
  – Where it would be exposed to direct sunlight or heat directly from the heater or in an extremely hot place.
  – Where it would be subject to rain, water splashes or excessive humidity.
  – Where it would be subject to dust.
  – Where it would be positioned on an unstable place.
  – Above connection cords or on the floor under which there is piping.
  – Where it could damage the car's fittings (spare tire, etc.) in or under the trunk.
- Before drilling holes in the trunk to install the unit, make sure that there is a sufficient space under the trunk so that you do not drill holes in the fuel tank, etc.
- Firmly install the unit using the provided screws.

ESPAÑOL

Muchas gracias por haber comprado este producto de JVC. Tenga a bien leer detenidamente este manual de instrucciones antes de poner en funcionamiento la unidad a fin de obtener un rendimiento óptimo y mayor duración.

ADVERTENCIA

- Esta unidad ha sido diseñada para funcionar con 12 voltios de CC, con sistemas eléctricos de masa NEGATIVA.
- Cambie el fusible por uno con la capacidad especificada. Si éste se quema a menudo, consulte a su concesionario JVC de equipos de audio para automóviles más cercano.

PRECAUCIONES

- **Temperatura interna del automóvil**
  Antes de escuchar un CD después de que su automóvil haya estado estacionado durante algún tiempo en bajas o altas temperaturas, espere hasta que la temperatura dentro del mismo se estabilice.
- **Condensación**
  En los siguientes casos, la humedad puede condensarse en la lente, que es un componente clave del reproductor de CD, imposibilitando la lectura de la señal del mismo:
  – Cuando se haya encendido un calentador.
  – Cuando la humedad es alta.
  En tales casos, extraiga el magazín y espere durante 1 o 2 horas.
- **Ajuste del volumen**
  – El CD produce muy poco ruido en comparación con las fuentes analógicas de sonido. Si el nivel de volumen está ajustado para estas fuentes, se puede dañar los altavoces debido al súbito incremento del nivel de salida. Por lo tanto, reduzca el volumen antes de ponerlo en funcionamiento y ajústelo como desee durante la reproducción.
  – Ajuste el volumen de tal manera que usted pueda escuchar los sonidos fuera del automóvil.

Mal seguimiento
El mal seguimiento se produce cuando se conduce por una carretera muy irregular. No obstante, aunque la unidad y compact disc no se dañarán por esta razón, es conveniente detener la reproducción y volver a escuchar el disco cuando llegue a una carretera en buenas condiciones, puesto que resulta molesto para los oídos.

INSTALACION

- **Evite instalar esta unidad en los siguientes lugares**
  – Donde esté directamente expuesta a la luz solar, al calor de un calefactor o en un lugar con temperatura muy alta.
  – Donde esté expuesta a la lluvia, salpicaduras de agua o humedad excesiva.
  – Donde haya polvo.
  – Lugares donde quedaría en posición inestable.
  – Sobre los cordones de conexión o en el piso debajo del cual se encuentra la tubería.
  – Donde podría dañar los accesorios del automóvil (neumático de repuesto, etc.) en/o debajo del baúl.
- Antes de perforar orificios en el baúl para instalar la unidad, asegúrese que haya suficiente espacio debajo del baúl ya que podría llegar a perforar el depósito de combustible, etc.
- Instale firmemente la unidad utilizando los tornillos suministrados.

FRANÇAIS

Nous vous remercions d'avoir acheté cet appareil JVC. Veuillez lire consciencieusement ce manual d'instructions avant de commencer à faire fonctionner l'appareil de façon à être sûr d'obtenir les performances optimales et la plus longue utilisation de cet appareil.

AVERTISSEMENT

- *Cet appareil est conçu pour fonctionner sur courant continu de 12 volts, à systèmes électriques de masse NEGATIVE.*
- *En remplaçant le fusible, en utiliser un avec la valeur spécifiée pour cet appareil. Si le fusible saute souvent, consulter votre revendeur d'autoradios JVC le plus proche.*

PRECAUTIONS A OBSERVER

- **Température ambiante dans la voiture**
  Pour l'écoute de disques audionumériques après un stationnement assez prolongé de la voiture à la chaleur ou au froid, attendre que la température dans la voiture se stabilise.
- **Condensation**
  Dans les cas suivants, de l'humidité peut se condenser sur la lentille, une pièce vitale du lecteur CD, rendant impossible la lecture du signal CD:
  – Quand le chauffage vient juste d'être mis.
  – Quand l'humidité est forte.
  Dans ces cas, retirer le magasin CD et attendre environ 1 à 2 heures.
- **Réglage du volume**
  – Les disques audionumériques produisent très peu de bruit comparés avec des sources analogiques. Si le niveau du volume est réglé comme pour ces sources, les haut-parleurs peuvent être abîmés par une augmentation soudaine du niveau de sortie. Par conséquent, baisser le volume avant fonctionnement et le régler comme voulu pendant la lecture.
  – Régler le volume pour pouvoir entendre les sons à l'extérieur de la voiture.

Erreur d'alignement
Un problème d'alignement peut se produire en conduisant sur une route très mauvaise. L'appareil et le disque audionumérique ne seront pas abîmés par un problème d'alignement, toutefois, comme ce n'est pas agréable pour les oreilles, arrêter la lecture et la reprendre quand la route sera meilleure.

MISE EN PLACE

- **Eviter l'installation dans les endroits suivants**
  – Où il risque d'être exposer directement au soleil ou chauffé directement par le chauffage ou dans un endroit très chaud.
  – Où il risque d'être mouillé par la pluie, les flaques d'eau ou dans une forte humidité.
  – Dans les endroits poussiéreux.
  – Où il peut être placé dans un endroit instable.
  – Au-dessus des cordons de raccordements ou sur le plancher sous lequel il y a une tuyauterie.
  – Là où il pourrait endommager des accessoires de la voiture (roue de secours, etc.) dans ou sous le coffre.
- *Avant de percer des trous dans le coffre pour installer l'appareil, s'assurer qu'il y a un espace suffisant sous le coffre pour ne pas faire de trous dans le réservoir de carburant, etc.*
- *Installer fermement l'appareil en utilisant les vis fournies.*

Instructions

A

When installing the unit horizontally

1. Attach the mounting brackets on the side panels of the unit using screws. **(Fig. a)**
2. Install the unit on the floor of the trunk using tapping screws. **(Fig. b)**

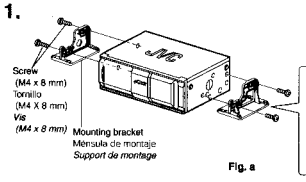
Instalación horizontal de la unidad

1. Fije las ménsulas de montaje a los paneles laterales de la unidad utilizando los tornillos. **(Fig. a)**
2. Instale la unidad en el piso del baúl usando tornillos roscachapa. **(Fig. b)**

Lors de l'installation de l'appareil horizontalement

1. *Fixer les supports de montage sur les panneaux latéraux de l'appareil en utilisant des vis.* **(Fig. a)**
2. *Installer l'appareil sur le plancher du coffre en utilisant des vis auto-taraudeuses.* **(Fig. b)**

1.



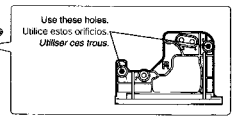


Fig. a

2.

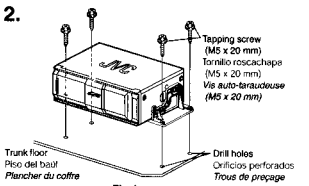


Fig. b

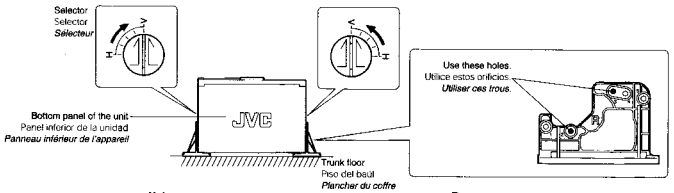
B

When installing the unit upright (Fig. c)

Instalación vertical de la unidad (Fig. c)

Lors de l'installation de l'appareil verticalement (Fig. c)

Fig. c



Notes:
- When fixing the unit with the screws, refer to "A When installing the unit horizontally" above.
- **When installing the unit upright, set the selectors located on both sides to the "V (vertical)" position. (When it is installed horizontally, be sure to set the selectors to the "H (horizontally)" position.)**
  – When installing the unit upright, securely install to the trunk floor.
- If you install the unit without setting the selectors correctly, the symptoms below may occur.
  – Sounds are intermitted.
  – CDs are damaged.

Notas:
- Para fijar la unidad con los tornillos, refiérase a "A Instalación horizontal de la unidad", más arriba.
- **Cuando instale la unidad verticalmente, coloque el selector ubicado al costado en la posición "V (vertical)". (Cuando instale la unidad horizontalmente, asegúrese de colocar los selectores en la posición "H (horizontal)".)**
  – Cuando instale la unidad verticalmente, fíjela firmemente al piso del baúl.
- Si instala la unidad sin ajustar correctamente el selector, podrían presentarse los siguientes síntomas.
  – Sonidos intermitentes.
  – Daños en los CDs.

Remarques:
- *Pour la fixation de l'appareil avec les vis,se référer à "A Lors de l'installation de l'appareil horizontalement" ci-dessus.*
- **Si l'appareil est installé verticalement, régler les sélecteurs situés sur les côtés sur la position "V (vertical)". (S'il est installé horizontalement, s'assurer de régler les sélecteurs sur la position "H (horizontal)".)**
  – *Lors de l'installation verticale, fixer fermement sur le plancher du coffre.*
- *Si vous installez l'appareil sans régler le sélecteur correctement, les problèmes suivants risquent de se produire.*
  – *Le son est discontinu.*
  – *Les CD sont endommagés.*

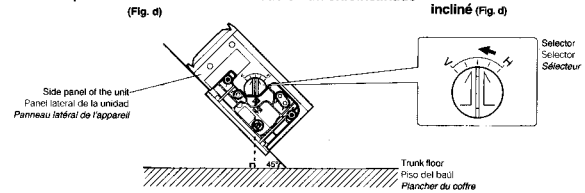
C

When installing the unit on an inclined plane (Fig.d)

Instalación de la unidad en un sitioinclinado (Fig. d)

Lors de l'installation de l'appareil sur un plan incliné (Fig. d)

Fig. d



Notes:
- When fixing the unit with the screws, refer to "A When installing the unit horizontally" above.
- **When installing, five angles can be selected. Be sure to position the selectors on both sides of the unit pointing upward, perpendicular (90°) to the earth surface.**
- If you install the unit without setting the selector correctly, the symptoms below may occur.
  – Sounds are intermitted.
  – CDs are damaged.

Notas:
- Para fijar la unidad con los tornillos, refiérase a "A Instalación horizontal de la unidad", más arriba.
- **Para la instalación, se pueden seleccionar cinco ángulos. Asegúrese de dirigir la flecha del dial provisto en ambos lados de la unida hacia arriba, perpendicular (90°) a la tierra.**
- Si instala la unidad sin ajustar correctamente el selector, podrían presentarse los siguientes síntomas.
  – Sonidos intermitentes.
  – Daños en los CDs.

Remarques:
- *Pour la fixation de l'appareil avec les vis,se référer à "A Lors de l'installation de l'appareil horizontalement" ci-dessus.*
- **Pour l'installation, cinq angles peuvent être choisis. S'assurer de positionner la flèche des sélecteurs, des deux côtés de l'appareil, perpendiculairement (90°) au sol.**
- *Si vous installez l'appareil sans régler le sélecteur correctement, les problèmes suivants risquent de se produire.*
  – *Le son est discontinu.*
  – *Les CD sont endommagés.*

D

When hanging the unit in the trunk space (Fig. e)

Instalación de la unidad suspendida dentro del baúl (Fig. e)

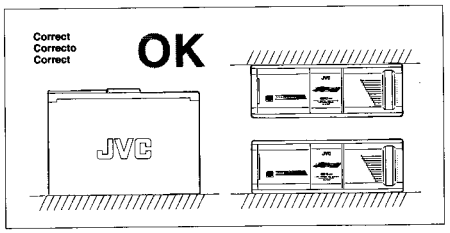
Lors de la suspension de l'appareil dans le coffre (Fig. e)

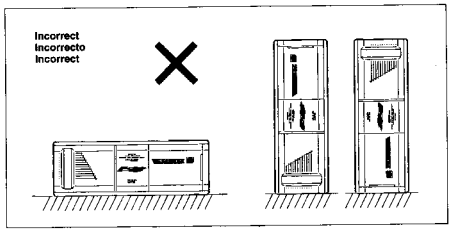
Fig. e

Note:
When fixing the unit with the screws, refer to "A When installing the unit horizontally" above.

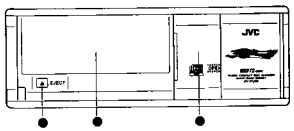
Nota:
Para fijar la unidad con los tornillos, refiérase a "A Instalación horizontal de la unidad" más arriba.

Remarque:
Pour la fixation de l'appareil avec les vis, se référer à "A Lors de l'installation de l'appareil horizontalement" ci-dessus.





LOCATION OF CONTROLS



- ⏏EJECTbutton
  Reset button: When pressing and hold for a few seconds
- CD magazine slot
- Door

UBICACION DE LOS CONTROLES

- Botón ⏏EJECT
  Botón de reposición: Cuando se pulse y mantenga pulsado durante algunos segundos
- Ranura del magazín de CD
- Puerta

EMPLACEMENT DES COMMANDES

- *Touche ⏏EJECT*
  Touche de réinitialisation: Quand elle est maintenue pressée pendant quelques secondes
- *Compartiment du magasin CD*
- *Porte*

Playing a CD Text/ Reproducción del CD Text/ Reproduction d'un CD Text

In a CD Text, some information about disc (its disc title, performer and track title) is recorded.
If you connect this unit to a receiver with the CD Text displaying function, you can show this disc information on the receiver's display.

En el CD Text se ha grabado cierta información relacionada con el disco (el título del disco, su ejecutante y título de pista).
Si usted conecta esta unidad a un receptor con función de visualización de CD Text, podrá exhibir esta información en la pantalla del receptor.

Dans un CD Text, certaines informations à propos du disque (son titre, l'interprète et les titres des plages) sont enregistrées.
Si cet appareil est connecté à un récepteur possédant une fonction d'affichage de CD Text, il est possible de voir les informations des disques sur l'affichage du récepteur.

TROUBLESHOOTING

- "RESET1-RESET8" or "R1-R8" appears on the display of the connected receiver (or other equipment).
  - Are the units connected correctly? After checking, press and hold the ⏏EJECT button for a few seconds to reset this unit. If the problem still persists, consult the JVC authorized dealer.
- Sounds are intermitted during play.
  - Are the selectors on both sides adjusted correctly?
- The repeat button of the receiver (CD changer controller) does not work properly.
  - Repeat play is not accepted while playing the last portion (about 10 seconds) of a CD. This is because the shock proof memory function works to allow the unit to change to the next CD smoothly.

LOCALIZACION DE AVERIAS

- "RESET1-RESET8" o "R1-R8" aparece en la pantalla del receptor (u otro equipo) conectado.
  - ¿Están las unidades conectadas correctamente? Después, pulse y mantenga pulsado el botón ⏏EJECT durante algunos segundos para reposicionar la unidad. Si el problema persiste, consulte con su concesionario JVC autorizado.
- Los sonidos se interrumpen durante la reproducción.
  - ¿Están los selectores de ambos lados ajustados correctamente?
- El botón de repetición del receptor (controlador del cambiador de CD) no funciona correctamente.
  - La reproducción repetitiva no será aceptada mientras se reproduce la última porción (unos 10 seg.) de un CD. Esto se debe a que está activada la función de memoria a prueba de golpes para que la unidad cambie suavemente al siguiente CD.

EN CAS DE DIFFICULTÉS

- *"RESET1-RESET8" ou "R1-R8" apparaît sur l'affichage de l'autoradio connecté (ou d'un autre appareil).*
  - *Les appareils sont-ils connectés correctement? Après l'avoir vérifié, maintenez pressée la touche ⏏EJECT pendant quelques secondes pour réinitialiser cet appareil. Si le problème persiste, consultez un revendeur JVC autorisé.*
- *Le son est discontinu pendant la lecture.*
  - *Les sélecteurs latéraux sont-ils ajustés correctement?*
- *La touche de répétition de l'appareil (contrôleur de CD changeur) ne fonctionne pas correctement.*
  - *La lecture répétée ne fonctionne pas lors de la reproduction de la fin d'un CD (les 10 dernières secondes environ). Ce la vient du fait que la fonction de mémoire antichoc fonctionne pour permettre à l'appareil de passer en douceur au CD suivant.*

SPECIFICATIONS

CD CHANGER SECTION

Frequency response	: 5-20,000 Hz
Dynamic range	: 93 dB
S/N ratio	: 96 dB
Distortion	: 0.006%
Wow & flutter	: Less than measurable limit
Output terminal	: Analog (8 pin x 1), 1.5 V (full scale)/less than 1 kΩ

GENERAL

Power requirement	
Operating voltage	: DC 14.4 V (11 V-16 V allowable)
Grounding system	: Negative ground
Dimensions (W x H x D)	: 252 x 88 x 174 mm (9-15/16" x 3-1/2" x 6-7/8")
Mass	: 2.3 kg (5.1 lbs.) (excluding accessories)

Design and specifications subject to change without notice.

ESPECIFICACIONES

SECCION DEL CAMBIADOR DE CD

Respuesta de frecuencia	: 5-20.000 Hz
Gama dinámica	: 93 dB
Relación S/R	: 96 dB
Distorsión	: 0.006%
Lloro y tremolo	: Inferior al límite medible
Terminal de salida	: Analógica (8 conectadores x 1), 1,5 V (escala total/Menos de 1 kΩ)

GENERALIDADES

Alimentación	
Tensión de funcionamiento	: 14,4 V CC (11 V-16 V permisible)
Sistema de puesta a masa	: Masa negativa
Dimensiones (An x Al x Pr)	: 252 x 88 x 174 mm
Peso	: 2.3 kg (excluyendo accesorios)

El diseño y las especificaciones están sujetos a cambio sin aviso previo.

CARACTERISTIQUES TECHNIQUES

SECTION CHANGEUR DE DISQUE AUDIONUMERIQUE

Réponse en fréquence	*: 5 à 20.000 Hz*
Gamme dynamique	*: 93 dB*
Rapport signal/bruit	*: 96 dB*
Distortion	*: 0,006%*
Pleurage et scintillement	*: Inférieur à la limite mesurable*
Borne de sortie	*: Analogique (8 brochesx1), 1,5 V (pleine échelle) inférieure à 1 kΩ*

GENERALES

Alimentation	
Tension de fonctionnement	*: CC 14,4 V (11 V à 16 V possible)*
Système de mise à la masse	*: Masse négative*
Dimensions (L x H x P)	*: 252 x 88 x 174 mm*
Masse	*: 2,3 kg (sans les accessoires)*

Présentation et caractéristiques modifiables sans préavis.

If a kit is necessary for your car, consult your telephone directory for the nearest car audio speciality shop.

Si fuera necesario un juego de instalación para su automóvil, consulte la guía telefónica para ubicar la tienda especialista en audio para automóviles más cercana.

Si un kit est nécessaire pour votre voiture, consulter votre annuaire téléphonique pour chercher le revendeur d'accessoires audio pour automobile le plus proche.

ENGLISH

ELECTRICAL CONNECTIONS

- This changer can be connected to JVC KD-MX, KD-SX or KS-FX series receivers that include a Changer Control function. When connecting to JVC KD-GS or KS-RT series, use the KS-U14K optional cord (not supplied). For more information, consult your nearest JVC car audio dealer.
- **To prevent short circuits from occurring, while making connections, keep the battery's negative terminal disconnected.**
  We recommend that you make all electrical connections (see **Fig. f/h**) before installing the unit. If you are not sure of your ability to correctly install this unit, have it installed by a qualified service technician.

Note:
This unit is designed for 12 volts DC, negative ground. If your vehicle does not have a 12 volt negative ground electrical system, you need a voltage inverter which can be bought from a JVC car audio dealer.
- Be sure to ground this unit to the car's chassis.

ESPAÑOL

CONEXIONES ELECTRICAS

- Este cargador puede ser conectado a los receptores de la serie KD-MX, KD-SX o KS-FX de JVC que incluyen una función de control del cambiador. Para conectarlo a la serie KD-GS o KS-RT de JVC, emplee un cable opcional KS-U14K. Para mayor información consulte a su concesionario JVC de equipos de audio para automóviles más cercano.
- **Para evitar cortocircuitos, mantenga desconectado el terminal negativo de la batería durante las conexiones.**
  Le recomendamos hacer todas las conexiones eléctricas (ver **Fig. f/h**) antes de instalar la unidad. Si no estuviera seguro de su habilidad para colocarla correctamente, hágala instalar por un técnico de servicio calificado.

Nota:
Esta unidad está diseñada para 12 V de CC, masa negativa. Si su vehículo no estuviera provisto de un sistema eléctrico de masa negativa de 12 voltios, necesitará un inversor de tensión que puede adquirir en un concesionario JVC de equipos de audio para automóviles.
- Asegúrese de conectar a masa esta unidad al chasis del automóvil.

FRANÇAIS

RACCORDEMENTS ELECTRIQUES

- *Ce changeur peut être raccordé aux récepteurs de série KD-MX, KD-SX ou KS-FX JVC qui disposent d'une fonction de commande de changeur. En raccordement aux séries KD-GS ou KS-RT JVC, utiliser le cordon KS-U14K en option. Pour plus d'informations, consulter votre revendeur d'autoradios JVC le plus proche.*
- **Pour éviter tout court-circuit alors que vous effectuez les raccordements, laisser la borne négative de la batterie non branchée.**
  Nous vous conseillons de faire tous les raccordements électriques (voir la **Fig. f/h**) *avant de mettre l'appareil en place. Si vous n'êtes pas sûr de vous, faites-le installer par un technicien qualifié.*

Remarque:
Cet appareil est conçu pour un courant continu de 12 volts, à masse négative. Si votre véhicule ne fournit pas une masse négative de 12 volts, il vous faut un convertisseur de tension, que vous pouvez vous procurer chez un revendeur d'autoradios JVC.
- *Bien raccorder le câble de mise à la masse de cet appareil au châssis de la voiture.*

A

When connecting to JVC *KD-MX/KD-SX/KS-FX* series receivers

Conexión a los receptores JVC de la serie *KD-MX/KD-SX/KS-FX*

Lors de la connexion à un récepteur de la série *KD-MX/KD-SX/KS-FX* de JVC

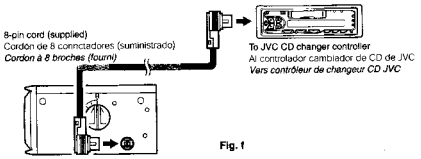

8-pin cord (supplied)
Cordón de 8 conectadores (suministrado)
Cordon à 8 broches (fourni)
To JVC CD changer controller
Al controlador cambiador de CD de JVC
Vers contrôleur de changeur CD JVC

Fig. f

B

When connecting to JVC *KD-GS/KS-RT* series receivers
- Use the KS-U14K optional cord (not supplied).

1. Remove the connector protective seal. **(Fig. g)**
2. Connect this unit to the receiver. **(Fig. h)**

Conexión a los receptores JVC de la serie *KD-GS/KS-RT*
- Utilice el cable opcional KS-U14 (no suministrado).

1. Retire el sello protector del conector. **(Fig. g)**
2. Conecte al terminal de esta unidad en los receptores. **(Fig. h)**

Lors de la connexion à un récepteur de la série *KD-GS/KS-RT* de JVC
- *Utiliser le cordon optionnel KS-U14K (non fourni).*

1. *Retirer l'autocollant de protection du connecteur.* **(Fig. g)**
2. *Connecter à la prise pour cet appareil sur le récepteur.* **(Fig. h)**

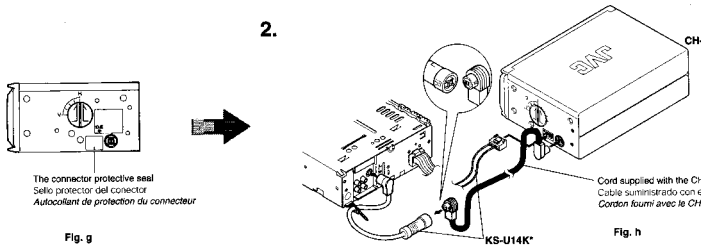
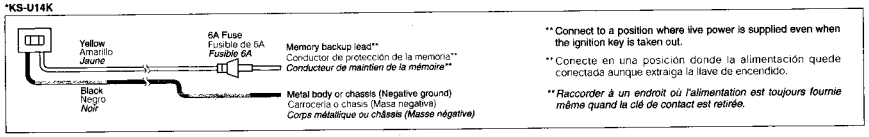


Fig. g

Fig. h


*KS-U14K
Yellow
Amarillo
Jaune
6A Fuse
Fusible de 6A
Fusible 6A
Memory backup lead**
Conductor de protección de la memoria**
Conducteur de maintien de la mémoire**
Black
Negro
Noir
Metal body or chassis (Negative ground)
Carrocería o chasis (Masa negativa)
Corps métallique ou châssis (Masse négative)
** Connect to a position where live power is supplied even when the ignition key is taken out.
** Conecte en una posición donde la alimentación quede conectada aunque extraiga la llave de encendido.
** Raccorder à un endroit où l'alimentation est toujours fournie même quand la clé de contact est retirée.

Note:
The magazine cannot be ejected when the memory backup lead or cord is disconnected or the fuse is blown.

Nota:
El magazín de CD no puede ser eyectado cuando el cordón o conductor de protección de memoria está desconectado o el fusible está fundido.

Remarque:
Le magasin CD ne peut pas être éjecté si le fil ou le cordon de maintien mémoire est débranché ou si le fusible est grillé.

• After installation and connection...

When loading the magazine for the first time into the CD changer, press and hold the ⏏EJECT button for a few seconds to reset the unit.
Normally do not press and hold the ⏏EJECT button.

Note:
You may also need to reset the unit in the following case.
- When the power supply is interrupted such as for replacement of the car's battery.
- When the unit dose not function correctly.

• Después de la instalación y conexión...

Cuand cargue el magazín por primera vez en el cambiador de CD, pulse y mantenga pulsado el botón ⏏EJECT durante algunos segundos para reposicionar la unidad.
Normalmente no pulse ni mantenga pulsado el botón ⏏EJECT.

Nota:
También podría ser necesario reposicionar la unidad en los casos siguientes.
- Cuando se interrumpa el suministro de energía debido por ejemplo, al reemplazo de la batería del automóvil.
- Cuando la unidad no funciona correctamente.

• Après l'installation et les connexions...

Lors de l'insertion du magasin CD dans le changeur CD, pour la première fois, maintenir pressée la touche ⏏EJECT pendant quelques secondes pour réinitialiser l'appareil.
Normalement, ne pas maintenir pressée la touche ⏏EJECT.

Remarque:
Il peut être nécessaire de réinitialiser l'appareil dans les cas suivants.
- *Quand l'alimentation est coupée, comme pendant le remplacement de la batterie de la voiture.*
- *Quand l'appareil ne fonctionne pas correctement.*

HANDLING MAGAZINES AND COMPACT DISCS

How to handle the magazines

- **Care in handling the magazines**
  - Do not carry the magazine with its inserting slot facing down so that the CDs do not drop.
  - Always keep the twelve disc trays loaded in the magazine.
  - When sliding the disc trays out or in to place CDs, hold the magazine horizontally not to drop CDs.
  - Without pulling out the disc trays from the magazine, do not insert CDs. Never place CDs directly into the magazines.
  - Do not expose the magazines to high temperatures or direct sunlight.
  - Do not disassemble the magazines.
  - Take care not to drop or hit the magazines. Do not apply excessive pressure to the disc trays which have been removed from the magazines.
  - Never apply solvents such as benzine, thinner or insecticide to the magazine or trays. These solvents may erode their surfaces.

Note:
If you need additional magazines, purchase XC-M200 magazines.

MANIPULACION DE MAGAZINES Y DISCOS COMPACTOS

Cómo manipular los magazines

- **Cuidado en la manipulación de magazines**
  - Para evitar que los CDs se caigan, no transporte el magazín con su ranura de inserción hacia abajo.
  - Mantenga siempre los doce portadiscos colocados en el magazín.
  - Cuando extraiga o introduzca las bandejas de los CDs, mantenga el magazín horizontalmente para evitar que se caigan los CDs.
  - No inserte los CDs sin haber extraído las bandejas de discos del magazín. Nunca introduzca CDs directamente dentro del magazín.
  - No lo exponga a la luz solar directa o a temperaturas elevadas.
  - No desarme los magazines.
  - No los deje caer ni los golpee. No aplique demasiada presión sobre las bandejas de discos extraídas de los magazines.
  - No use jamás solventes tales como bencina, diluyente o insecticida en el magazín o las bandejas. Los mismos podrían perjudicar su superficie.

Nota:
Si necesita un magazín adicional, adquiera un XC-M200.

MANIPULATION DES MAGASINS ET DES DISQUES COMPACTS

Manipulation des magasins

- **Faire attention en manipulant les disques**
  - *Ne portez pas le magasin avec la fente d'insertion dirigée vers le bas pour ne pas faire tomber les CD.*
  - *Toujours laisser douze tiroirs de disque chargés dans le magasin.*
  - *Lorsque l'on fait glisser les tiroirs de disque pour les ouvrir ou les refermer, tenir le magasin horizontalement pour ne pas faire tomber les CD.*
  - *Ne pas insérer de CD sans ouvrir le tiroir de disque du magasin. Ne pas insérer les CD directement dans le magasin.*
  - *Ne pas exposer les magasins à de hautes températures ni aux rayons directs du soleil.*
  - *Ne pas démonter les magasins.*
  - *Faire attention de ne pas faire tomber ou cogner les magasins. Ne pas appliquer de pression excessive sur les tiroirs de disque qui ont été retirés des magasins.*
  - *Ne jamais appliquer de solvants comme de la benzine, du diluant ou des insecticides sur le magasin ou les tiroirs de disque. Ces solvants peuvent éroder leurs surfaces.*

Remarque:
Si l'on a besoin d'un magasin supplémentaire, acheter le XC-M200.

How to load discs / Colocación de discos / Chargement des disques

Magazine
Magazín
Magasin

Note:
The inserted CDs are counted as "disc-1", "disc-2"... from the bottom to the top.

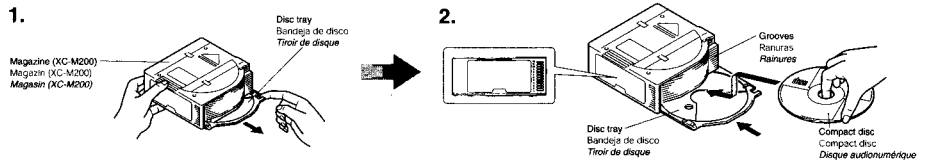
Nota:
Los CDs insertados se cuentan como "disc-1", "disc-2"... desde abajo hacia arriba.

Remarque:
Les CD insérés sont comptés comme "disque 1", "disque 2", etc. en commençant du bas et en allant vers le haut.

1. Slide the disc tray partly out from the magazine until it stops.
2. Place a CD on the disc tray with its label side up.

1. Extraiga parcialmente la bandeja de disco del magazín hasta que se detenga.
2. Ponga un CD en la bandeja de disco con su etiqueta hacia arriba.

1. *Faire glisser le tiroir de disque partiellement à l'extérieur du magasin jusqu'à ce qu'il s'arrête.*
2. *Placer un CD sur le tiroir de disque avec la face imprimée dirigée vers le haut.*



3. Align the disc tray with the grooves in the magazine, and push the disc tray all the way in.
   - Check that the disc tray is securely inserted into the magazine. If a CD becomes disengaged from the disc tray, reposition it on the disc tray.

3. Alinee la bandeja de disco con las ranuras del magazín e introduzca la bandeja de disco hasta el fondo.
   - Verifique que la bandeja de disco esté firmemente introducida dentro del magazín. Si algún CD se sale de la bandeja de disco, vuélvalo a poner sobre la bandeja.

3. *Aligner le tiroir de disque avec les rainures dans le magasin et le pousser complètement.*
   - *Vérifier que le tiroir de disque est correctement inséré dans le magasin. Si un CD est désengagé du tiroir de disque, le repositionner sur le tiroir.*

Notes:
- There are openings in the disc trays through which signals are read from the CDs. These openings leave part of the shiny side of the CD exposed. Be careful not to touch the shiny surface of the CD.
- It is not possible to play a CD if placed upside down.

Notas:
- Las bandejas tienen aberturas por las cuales son leídas las señales de los discos. Estas aberturas dejan expuesta parte del lado brillante del disco. Tenga cuidado de no tocar la superficie brillante del disco.
- No es posible reproducir un CD colocado boca abajo.

Remarques:
- *Il y a des ouvertures dans les tiroirs de disque à travers lesquelles les signaux sont lus des disques. Ces ouvertures laissent une partie de la face brillante du disque exposée. Faire attention de ne pas toucher à la surface brillante du disque.*
- *Il n'est pas possible de reproduire un CD s'il est placé à l'envers.*

How to handle CDs / Cómo manipular compact disc / Manipulation des disques audionumériques

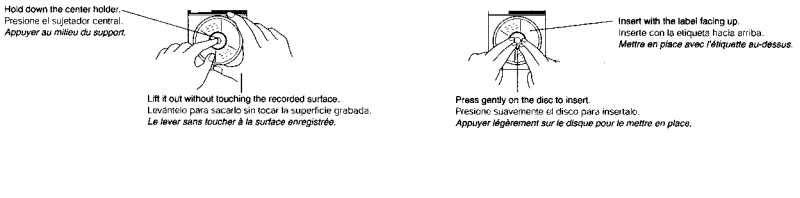
- Use CDs with the mark shown. / Utilice compact disc con la marca indicada. / *Utiliser des disques audionumériques avec la marque montrée.*

COMPACT disc DIGITAL AUDIO
COMPACT disc DIGITAL AUDIO TEXT

- Do not touch the recorded surface of a CD (shiny side, opposite to the label) when handling the CDs.
- **Storage**
  Make sure to keep CDs in their cases. If discs are piled on top of one another without their cases, they may be damaged. Do not put CDs where they will be exposed to direct sunlight or in a place subject to high temperatures and humidity. Avoid leaving CDs in your car.

- No toque la superficie grabada (lado con reflejos, opuesto a la etiqueta) mientras manipula los discos.
- **Cómo guardar los discos**
  Guarde los discos en sus cajas. No apile discos sin sus cajas, ya que podrían dañarse. No ponga los discos donde queden expuestos a la luz solar directa o en lugares con alta temperatura o humedad. No los deje en el automóvil.

- *Ne pas toucher à la surface enregistrée du disque (la face réfléchissante, le verso de l'étiquette) en manipulant les disques.*
- **Stockage**
  Bien conserver les disques dans leurs boîtes. Si des disques sont empilés les uns sur les autres sans leurs boîtes, ils peuvent être abîmés. Ne pas mettre des disques où ils pourraient être exposés à la lumière directe du soleil ou dans un endroit sujet à de fortes températures ou à l'humidité. Eviter de laisser des disques dans votre voiture.


Hold down the center holder.
Presione el sujetador central.
Appuyer au milieu du support.
Lift it out without touching the recorded surface.
Levántelo para sacarlo sin tocar la superficie grabada.
Le lever sans toucher à la surface enregistrée.
Insert with the label facing up.
Inserte con la etiqueta hacia arriba.
Mettre en place avec l'étiquette au-dessus.
Press gently on the disc to insert.
Presione suavemente el disco para insertalo.
Appuyer légèrement sur le disque pour le mettre en place.

- **Maintenance of discs**
  - When fingerprints and dirt adhere to a CD, wipe the disc clean with a soft, dry cloth, wiping from the inside towards the edge. If it is difficult to clean, wipe the CD with a cloth moistened with water.
  - Do not use record cleaners, benzine, alcohol or antistatic agents.
  - Do not damage the label side or stick paper or adhesive to the surface.

- **Mantenimiento de los discos**
  - Limpie las huellas y el polvo que se adhiere sobre el disco con un paño limpio y suave desde el centro hacia los bordes. Si no salen, límpielo con un paño humedecido con agua.
  - No utilice limpiadores para discos, bencina, alcohol o agentes antiestáticos.
  - No dañe el lado con etiqueta ni pegue papeles o adhesivos en la superficie.

- **Entretien des disques**
  - *Si des empreintes digitales ou de la poussière adhèrent à un disque, essuyer le disque avec un tissu doux, sec et propre, en essuyant de l'intérieur vers l'extérieur. S'il est difficile à nettoyer, essuyer le disque avec un tissu humidifié avec de l'eau.*
  - *Ne pas utiliser de nettoyants, benzine, alcool ou agent antistatique.*
  - *Ne pas endommager le côté de l'étiquette ou coller du papier ou de la bande adhésive sur la surface.*

Correct / Correcto / *Correct*

Incorrect / Incorrecto / *Incorrect*

Caution:
CDs shaped like a heart, flower, etc. (specially-shaped CDs) cannot be used with this unit. If this type of CD is loaded, it will cause a trouble.

Precaución:
Los CD con forma de corazón, flor, etc. (CD con forma especial), nopueden ser uasados con esta unidad. Si coloca tipos de CD, se producirá una falla.

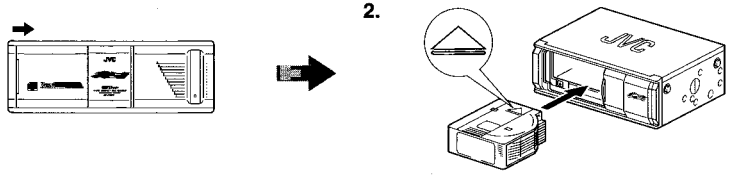
Attention:
Des CD en forme de coeur, de fleur, etc. (CD de forme spéciale) ne peuvent pas être utilisés avec cet appareil. Si ce type de CD est chargé, il causera un problème de fonctionnement.

How to load the magazine / Colocación de un magazín / Chargement d'un magasin

1. Slide the door to the right.
2. Load the magazine.
   - Load the magazine into the CD changer with the ≙ mark on top and the CD insertion side to the right.

1. Deslice la puerta hacia la derecha.
2. Coloque un magazín.
   - Coloque un magazín en el cambiador de CD con la marca "≙" apuntando hacia arriba y el lado de inserción del CD hacia la derecha.

1. *Faire glisser la porte vers la droite.*
2. *Charger un magasin.*
   - *Charger un magasin dans le chargeur CD avec la marque ≙ en haut et le côté d'insertion CD sur la droite.*



3. Close the door.
   - Normally the door must be kept closed except when changing the magazine.

3. Cierre la puerta.
   - La puerta debe estar cerrada excepto al poner o sacar un magazín.

3. *Fermer le volet.*
   - *Le volet doit être fermé en dehors du chargement ou du retrait d'un magasin.*

Cautions:
- Do not insert your hands or any foreign object into the loading slot otherwise you may be injured or cause malfunctions or damage.
- When a label on the magazine, if any, partly peels off, it may cause a malfunction. If this happens, remove the label or stick it on firmly again.

Precaución:
- No introduzca la mano o algún objeto por la ranura de carga pues podría lastimarse o producir fallas de funcionamiento o daños.
- Si el magazín está provisto de una etiqueta y ésta se despega en parte, podría producirse una falla de funcionamiento. En tal caso, despegue la etiqueta o vuélvala a pegar firmemente.

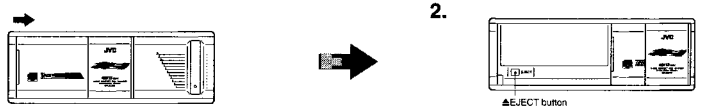
Attention:
- *Ne pas introduire vos mains ou d'objet étranger dans la fenêtre de chargement, vous pourriez vous blesser ou causer des mauvais fonctionnements ou dommages.*
- *Si l'étiquette sur le magasin se décolle, cela peut causer un mauvais fonctionnement. Si cela se produit, retirer l'étiquette ou la recoller solidement.*

How to unload the magazine / Cómo retirar un magazín / Retrait d'un magasin

1. Slide the door to the right.
2. Press the ≙EJECT button.
   - The magazine ejects from the loading slot.

1. Deslice la puerta hacia la derecha.
2. Pulse el botón ≙EJECT.
   - El magazín es expulsado de la ranura de carga.

1. *Faire glisser la porte vers la droite.*
2. *Appuyer sur la touche ≙EJECT.*
   - *Le magasin est éjecté du compartiment.*



Note:
When the magazine cannot be ejected, push in the magazine and play the 12th disc once more; when play has ended, repeat the above procedure.
If the above procedure dose not work, follow the steps below:
1. Be sure that the selectors are set correctly.
2. Peel off the protective seal over the compulsory eject hole. **(Fig. I)**
3. Put a straight stick like a screw driver into the hole. **(Fig. J)**

Nota:
Cuando el magazín no pueda ser eyectado, presione el magazín hacia adentro y reproduzca el disco no. 12 una vez más; cuando la reproducción haya terminado, repita el procedimiento de arriba.
Si el procedimiento de arriba no funciona, realice los pasos siguientes:
1. Asegúrese de que los selectores estén correctamente ajustados.
2. Despegue el sello protector del orificio de expulsión forzosa. **(Fig. I)**
3. Introduzca en el orificio una varilla recta, tal como un destornillador. **(Fig. J)**

Remarque:
Si le magasin ne peut pas être éjecté, pousser sur le magasin et lire une fois de plus le 12ème disque; quand la lecture est terminée, refaire la procédure précédente.
Si la procédure ci-dessus ne fonctionne pas, suivez les étapes suivantes:
1. *Assurez-vous que les sélecteurs sont réglés correctement.*
2. *Décollez l'autocollant protecteur du trou d'éjection forcée.* **(Fig. I)**
3. *Insérez une tige droite telle qu'un tournevis dans le trou.* **(Fig. J)**

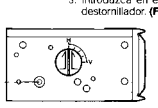

The compulsory eject hole and protective seal
Orificio de expulsión forzosa y sello protector
Le trou d'éjection forcé et l'autocollant protecteur

Fig. I

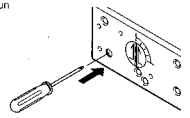


Fig. J

Should the problem still persists, consult the JVC authorized dealer.

Si el problema persiste, consulte con su concesionario JVC autorizado.

Si le problème persiste, consultez un revendeur JVC autorisé.

- **Listening to CDs**
  This unit does not have operation buttons to play CDs. CD operations can be performed using the JVC CD changer controller, etc. connected to this unit.
  For CD operations, refer to the Instructions of the CD Changer Controller.

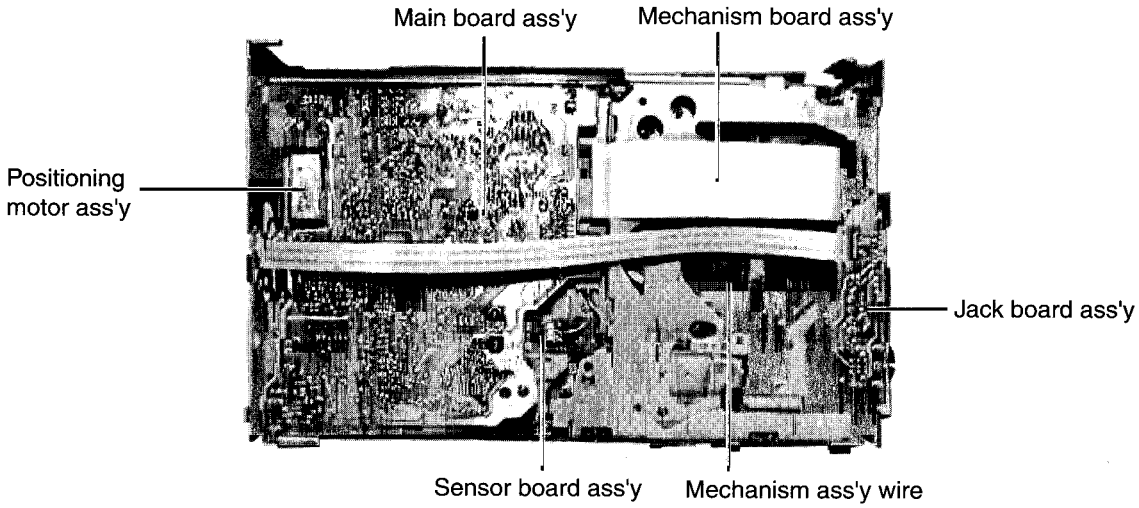
- **Reproducción de CDs**
  Esta unidad no tiene botones de operación para reproducción de CD. Las operaciones de CD pueden ser ejecutadas utilizando el controlador cambiador de CD de JVC, etc., conectado a esta unidad.
  Para las operaciones de CD refiérase a las instrucciones del controlador cambiador de CD.

- **Ecoute des disques audionumériques**
  Cet appareil n'a pas de touches de fonctionnement pour lire les disques. Les opérations CD peuvent être effectuées en utilisant le contrôleur de changeur CD JVC, etc. raccordé à cet appareil.
  Pour les opérations CD, se reporter au manuel d'instructions du contrôleur de changeur CD.

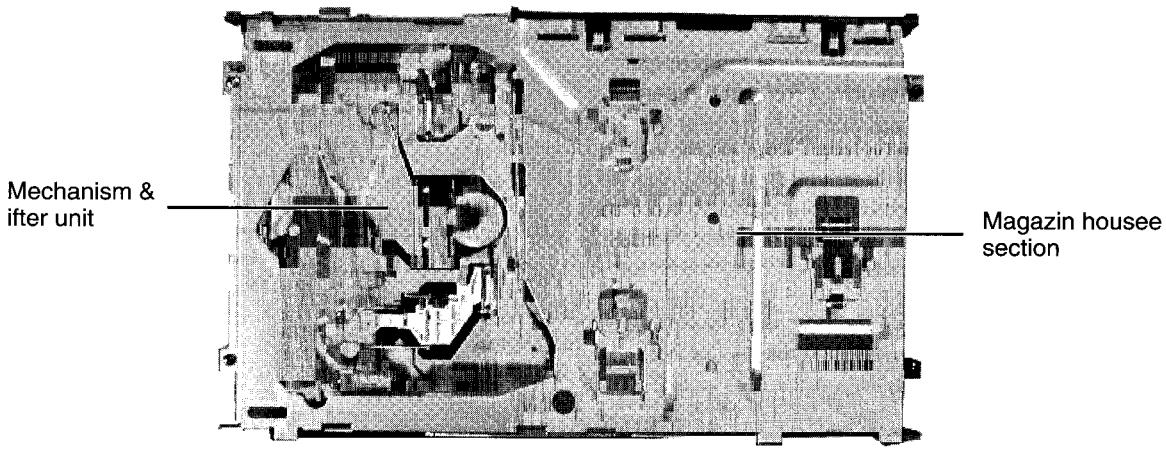
-MEMO-

Location of Main Parts

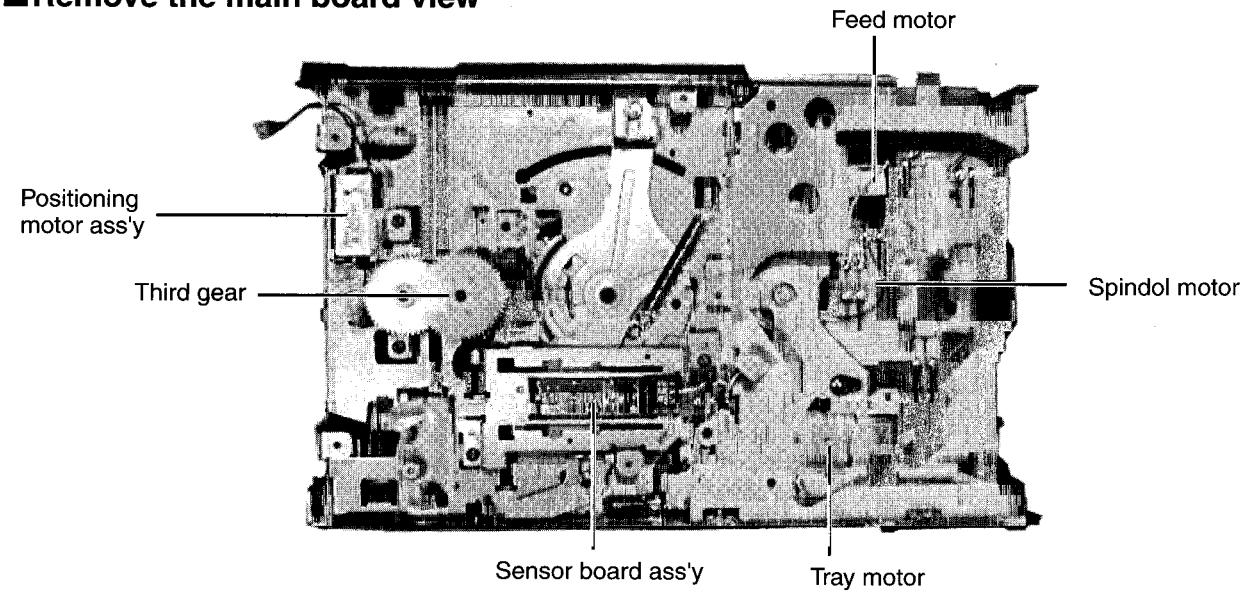
■Bottom view



■Top Side view



■Remove the main board view



Removal of Main Parts

Disassembling Procedures

Perform operations according to the items to be disassembled.

Replacement of the Pickup

1. After removing the exterior (top and bottom)...
2. Proceed to the "Pickup Replacement" section.
3. When applying grease, refer to the Exploded View.
   Use new grease.

Mechanism Section

1. Remove the exterior (required section only).
2. The mechanism section is designed so that each unit can be removed separately.
3. When re-assembling, refer to the assembling precautions.
   (Use new grease when applying grease.)

■Exterior Section

Removing the Bottom Cover and Front Panel Assembly

1. Remove the screw (1-a) to unlock the mounting direction knob located on the side of the main unit.
2. Turn the mounting direction knob in the direction of the arrow using a coin, etc. to remove it. (The knob can be removed only when it is set to this position.)
3. Remove the four top cover fixing screws (1) at the triangle (A) marks on the side of the main unit. (Perform the same operation on both sides.)
4. Turn the unit upside down so the bottom surface is facing upward.
5. Lift the rear edge of the bottom cover slightly and lift the side by grasping the DIN jack section on the side panel, then turn it toward the front (raise upward) to remove the bottom cover.
6. Unhook the four catches located on both sides of the front panel, and turn the front panel toward the top cover (lower down) to remove the front panel.

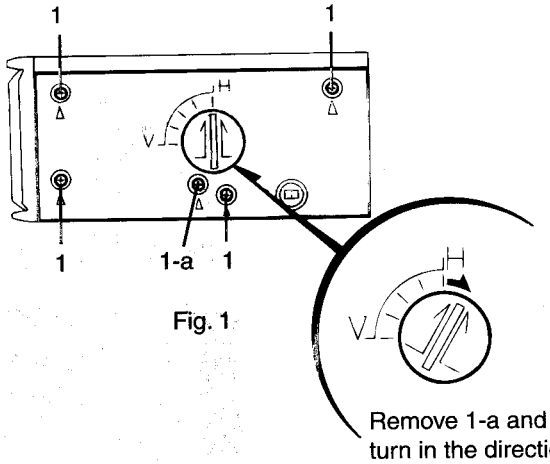


Fig. 1

Remove 1-a and turn in the direction of the arrow.

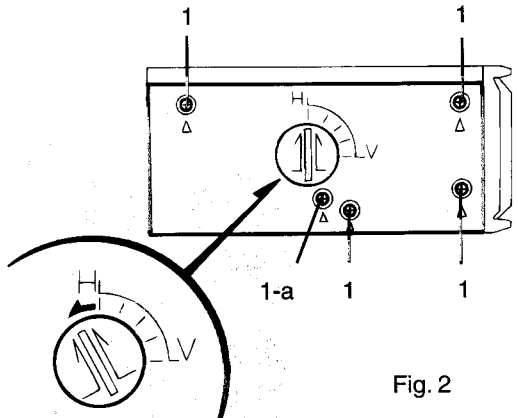


Fig. 2

Remove 1-a and turn in the direction of the arrow

The front panel can be separated by raising the cover.

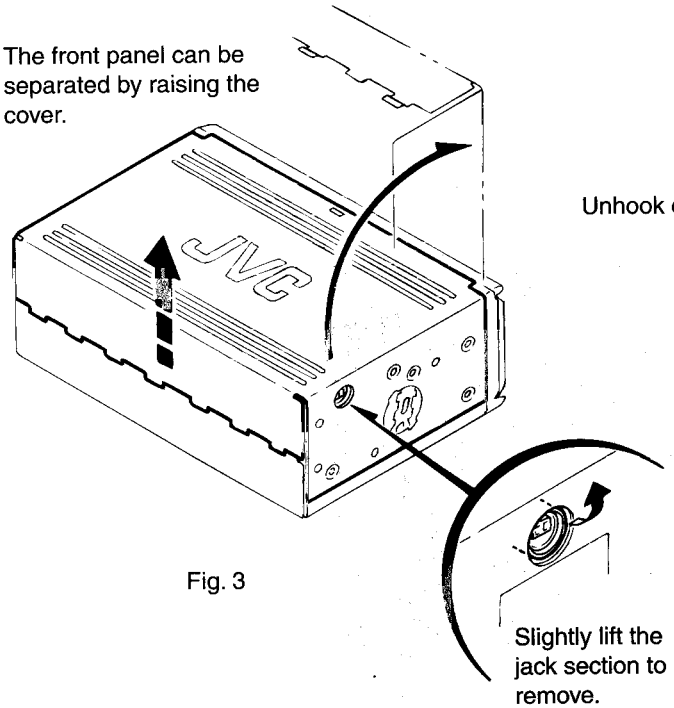


Fig. 3

Unhook catches

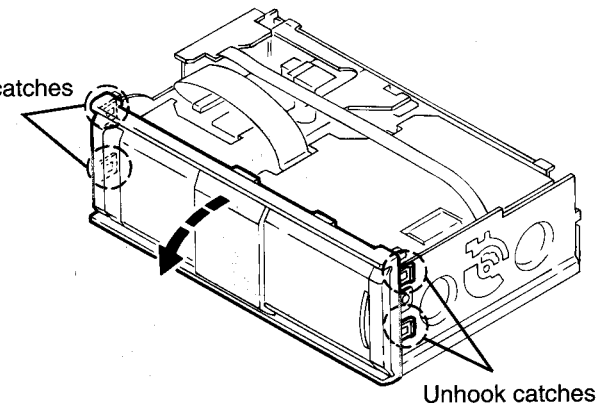


Fig. 4

Removing the Top Cover

1. Remove the four damper bracket fixing screws (2) to remove the damper brackets.
2. Pull out the dampers, being careful not to damage them.

When re-attaching a damper, insert your finger to push out the center of the damper to mount it on the damper shaft, as shown in Fig. 6-1.

3. Turn the damper spring bracket toward the top at a right angle as shown in Fig. 7, then push down the lower side of the damper spring bracket to lift it off.
4. Remove the three fixing screws (3) and (4) on the DIN jack PCB assembly.
5. Lift the changer unit upward.
6. Remove the damper springs from the mechanism chassis if required. To reassemble, refer to the diagram below.

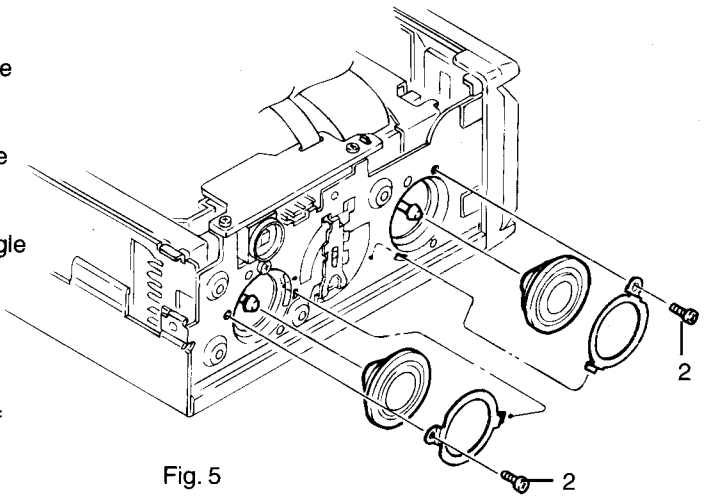


Fig. 5

Apply alcohol to the shaft then immediately attach the damper. (After attaching, check that the shaft is correctly inserted.)

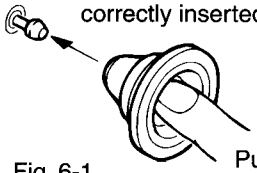


Fig. 6-1

Push out with your finger before attaching

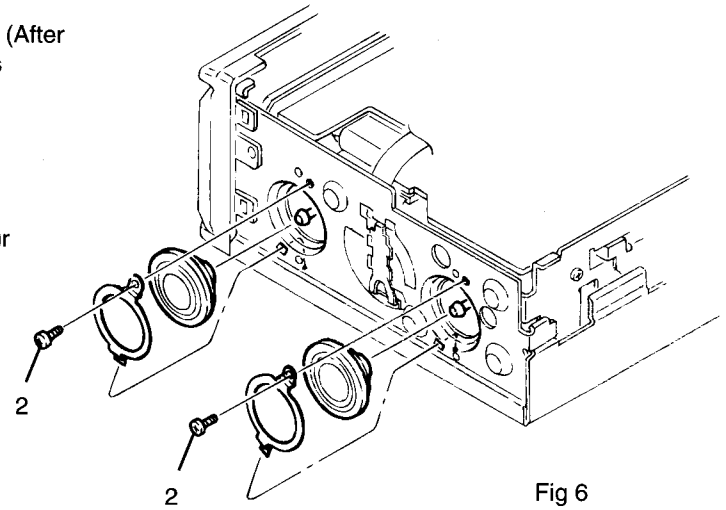


Fig 6

Lift the changer unit upward

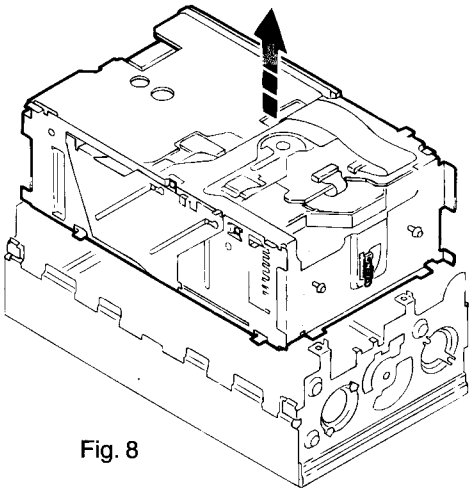


Fig. 8

Turn to the top position (at a right angle), then push down to lift off.

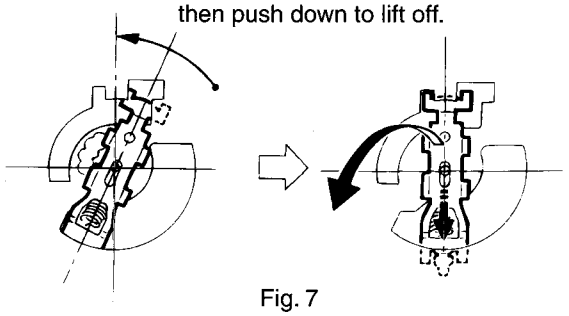
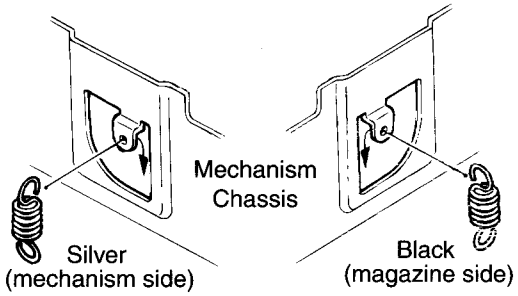


Fig. 7



How to Attach the Damper Springs

Fig. 8-1

Remove the flexible ribbon wire if required

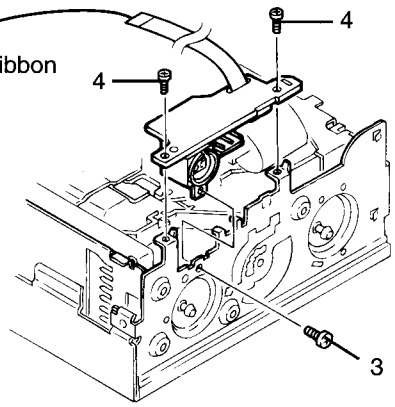


Fig. 9

Removing the Fittings

1. Remove the fixing screw (5).
2. Unhook the two catches (a) on the top edge of the fitting, then unhook the catches (b) at the left/right bottom edges.

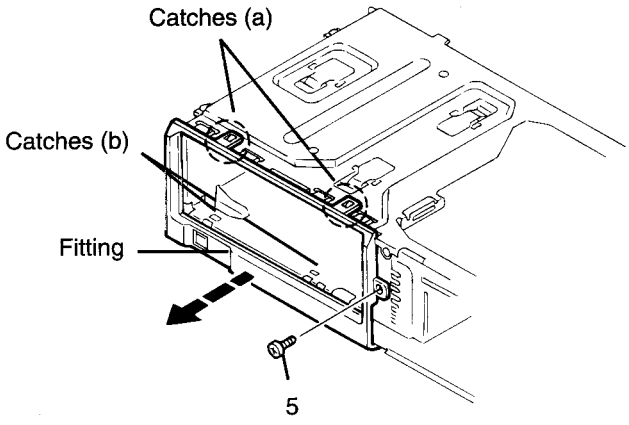


Fig. 12

Removing the Main PCB Assembly

1. Remove the power IC fixing screw (6).
2. Remove the four screws (7) securing the main PCB assembly.
3. Disconnect position motor wire connector CN504 from the main PCB assembly.
4. Disconnect sensor PCB assembly wire connector CN601 from the main PCB assembly.
5. Remove the flexible ribbon wire from CN502 on the traverse mechanism PCB assembly.
   When re-installing the PC boards, refer to the reassembling procedures for protecting switches, etc.

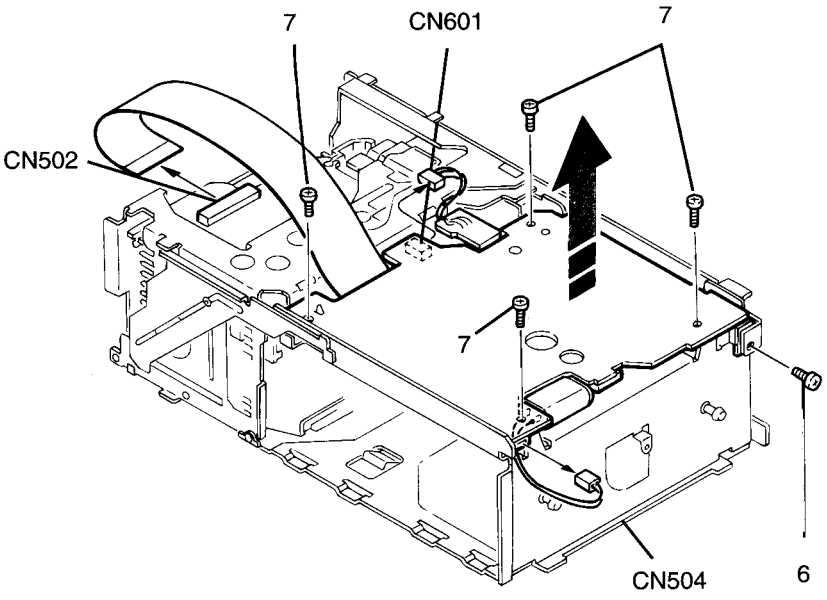


Fig. 13

■Changer Mechanism Section

Sensor Assembly Unit

1. Remove the two screws (1) securing the sensor assembly unit.
2. Unhook the springs on the back of the sensor assembly unit from the holes on the chassis.

Magazine Lock Arm

1. Remove the magazine lock spring from the front side of the chassis.
2. Remove the poly-washer (b) securing the magazine lock arm.
3. Turn the magazine lock arm in the direction of the arrow until the notch is at the "C" position to remove it from the chassis.

Positioning Motor Assembly

1. Remove the two screws (2) securing the positioning motor.
2. Slightly lift the positioning motor assembly to remove it from the two burrs on the chassis.

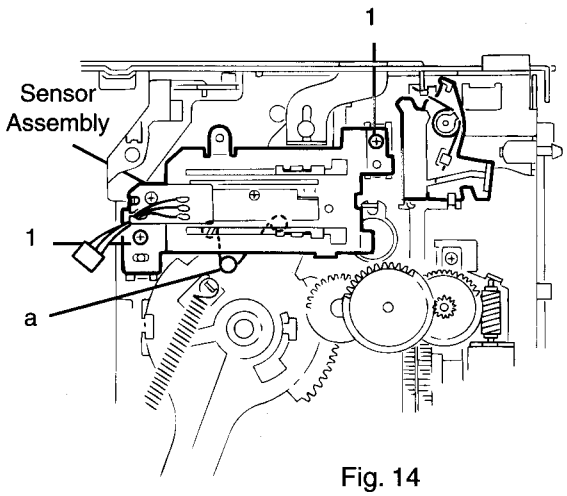


Fig. 14

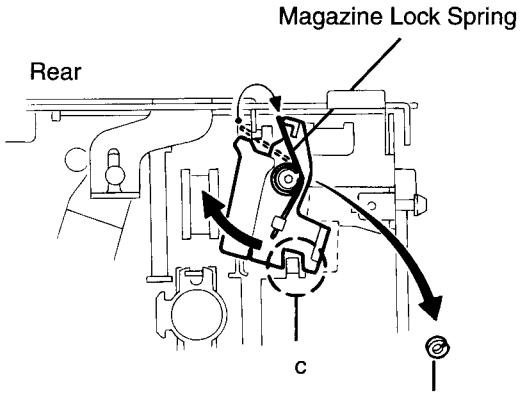


Fig. 15

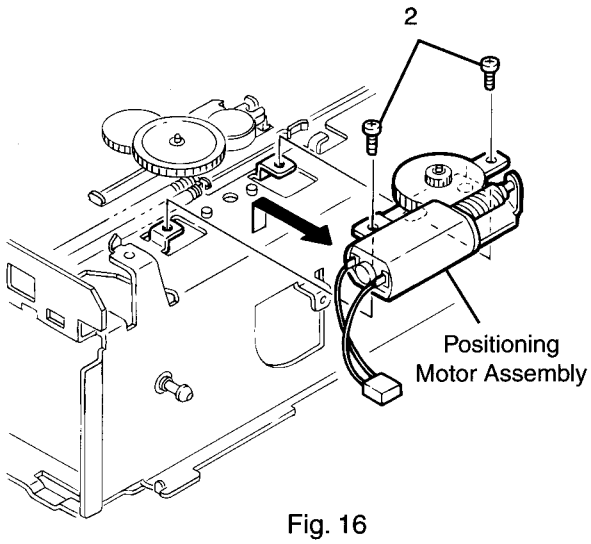


Fig. 16

Rear Slider

1. Position the unit with the front section facing down. Rotate the third gear located on the back of the main unit in the direction of the arrow (clockwise).
2. Shift the rear slider in the direction of the arrow and remove it at the rear slider mounting position (at the widest hole).

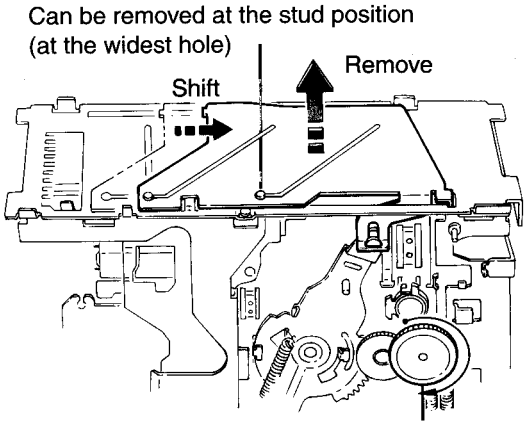


Fig. 17

Front Slider

1. Position the unit with the rear section facing down. Rotate the third gear located on the bottom of the unit in the direction of the arrow (clockwise) until the front slider is shifted to the outermost position.
2. Remove the E-washer securing the front slider to remove the front slider from the chassis.

Top Plate

1. Remove the nine screws (3) securing the top plate.
2. Disconnect the section (e) attached to the rear of the unit, then lift the top plate slightly.
3. Slide the top plate toward the rear of the unit to remove the upper rod from the top plate.

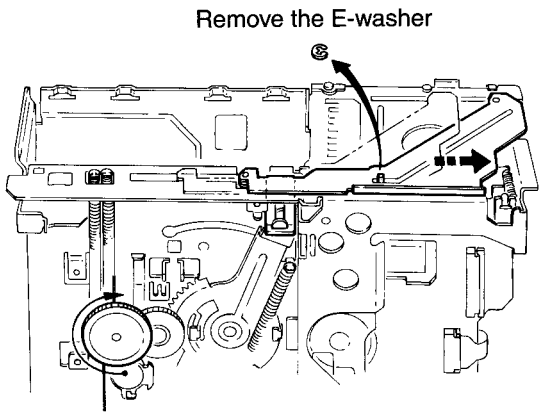


Fig. 18

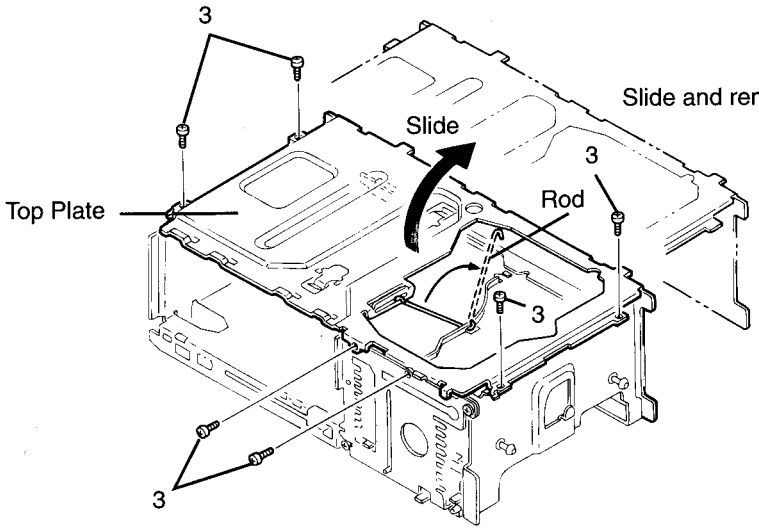


Fig. 19

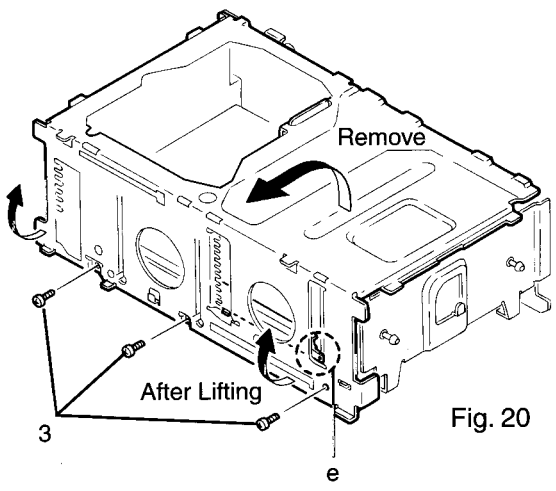


Fig. 20

Lifter Unit

1. Unhook the elevator spring located on the front side of the unit.
   (Be sure to first unhook the spring from the lifter side as shown in the upper part of the diagram.)
2. Lift the lifter unit upward, then remove the lower rod to remove the lifter unit from the chassis.

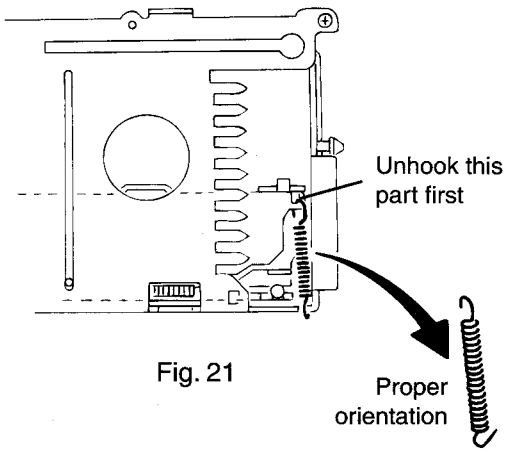


Fig. 21

Lifter Bracket

1. Remove the two lifter bracket fixing screws (4) located on the back of the lifter unit.
2. Remove the lower rod.

Side Bracket and Traverse Mechanism

1. Remove the two side bracket unit fixing screws (5) to disconnect the side bracket unit from the lifter unit.
2. Remove the three shafts on the traverse mechanism assembly from the lifter unit.

For reassembling, refer to the reassembling procedures.

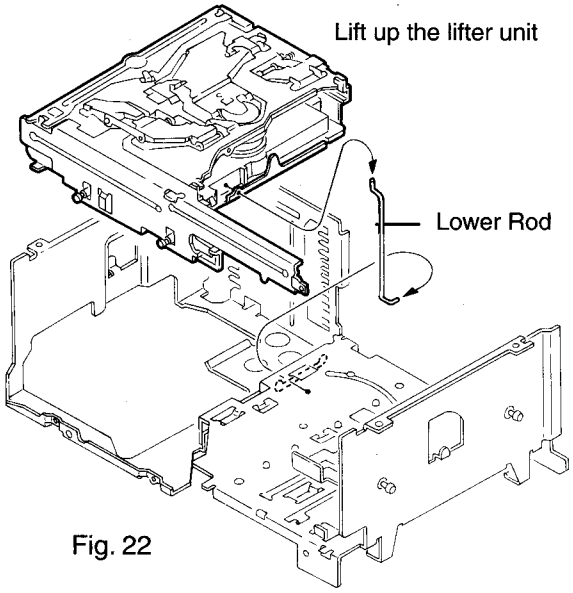


Fig. 22

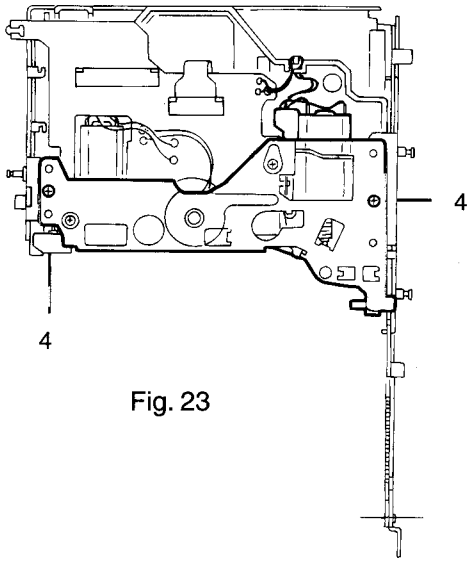


Fig. 23

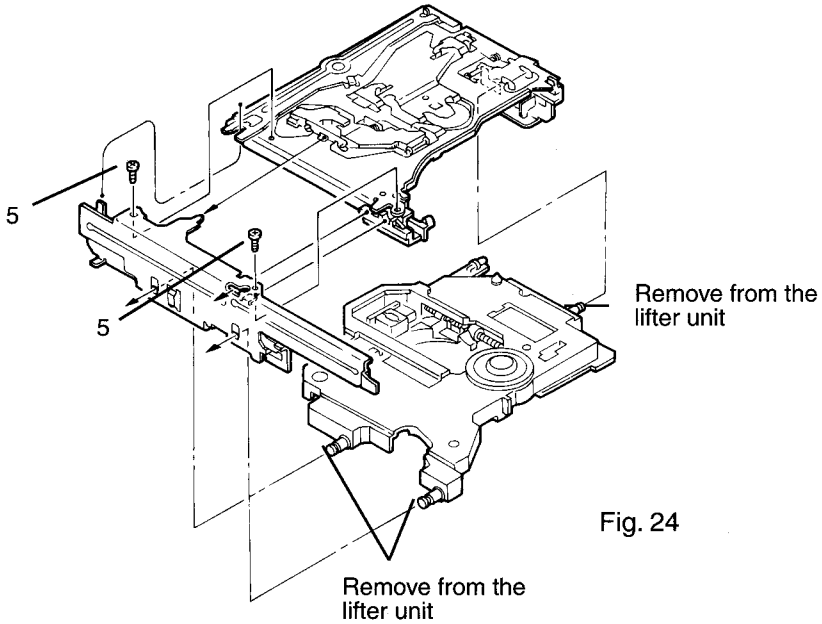


Fig. 24

Pickup Assembly

1. Remove the three mechanism PCB fixing screws (6) located on the back of the traverse mechanism.
2. Disconnect the two feed motor wires (blue and white), two spindle motor wires (red and black) and two tray motor wires (brown and black) that are soldered to the mechanism PCB assembly.
3. Short-circuit the grounding point on the mechanism PCB assembly, and lift it with the flexible PCB attached to connector CN501.
   Next, short-circuit the grounding point on the pickup unit and disconnect CN501.
4. Remove the screw (7) to remove the feed motor assembly.
5. Remove the screw (8) to remove the shaft holder retaining the feed slide shaft assembly and the middle gear.
6. Remove the middle gear.
7. Move the pickup assembly upward from the gear section and remove it from the traverse chassis assembly.
8. Remove the two screws (9) to remove the rack arm.
9. Pull out the feed slide shaft assembly.
10. Remove the screw (10) to remove the spring.

Note: Before replacing the pickup, be sure to short-circuit the grounding points. First short-circuit the PCB section and then immediately short-circuit the pickup section.

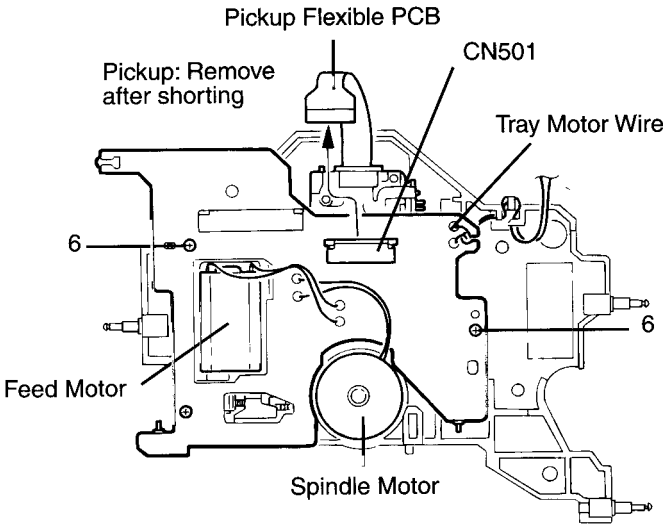


Fig. 25

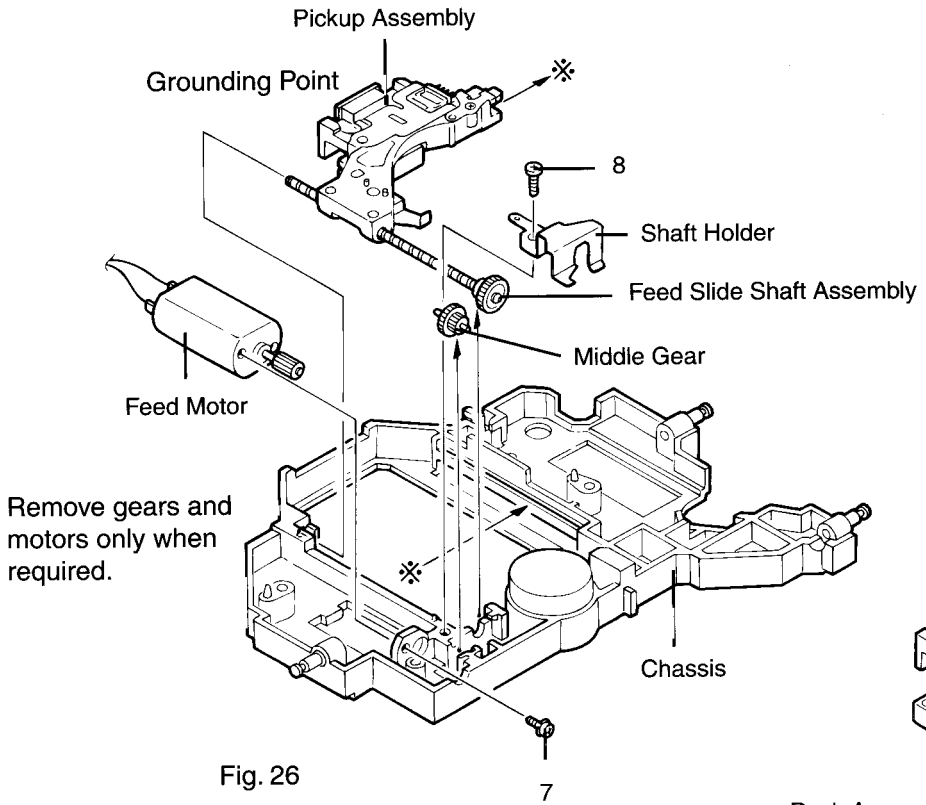


Fig. 26

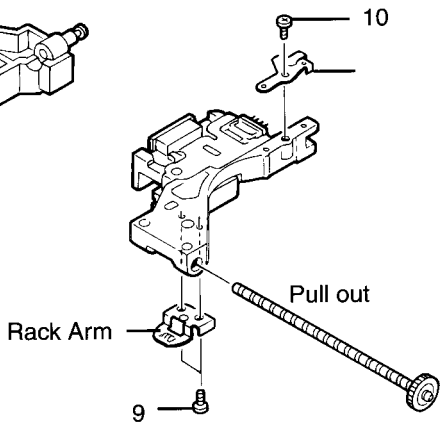


Fig. 27

Tray Motor

1. Remove the two screws (11) securing the tray motor.
2. Remove the two screws (12) to remove the tray motor assembly from the tray motor holder.

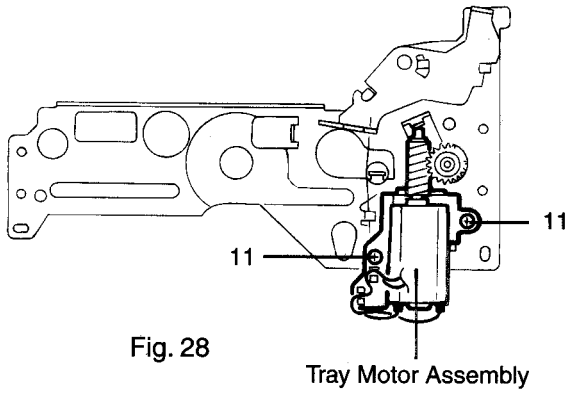


Fig. 28

Separation of the Chassis L Assembly and Chassis R Assembly

1. Remove the two screws (13) retaining the chassis "L" and "R" assemblies.
2. Slide the chassis L assembly toward the front and detach it, then remove the chassis "L" upward.

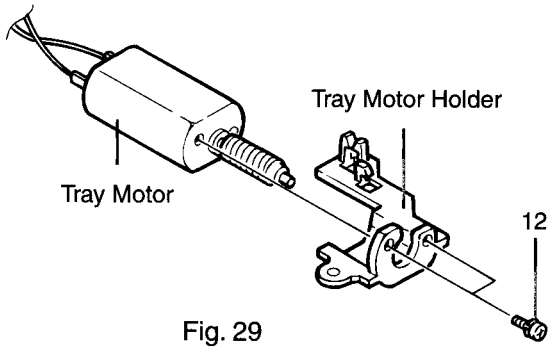


Fig. 29

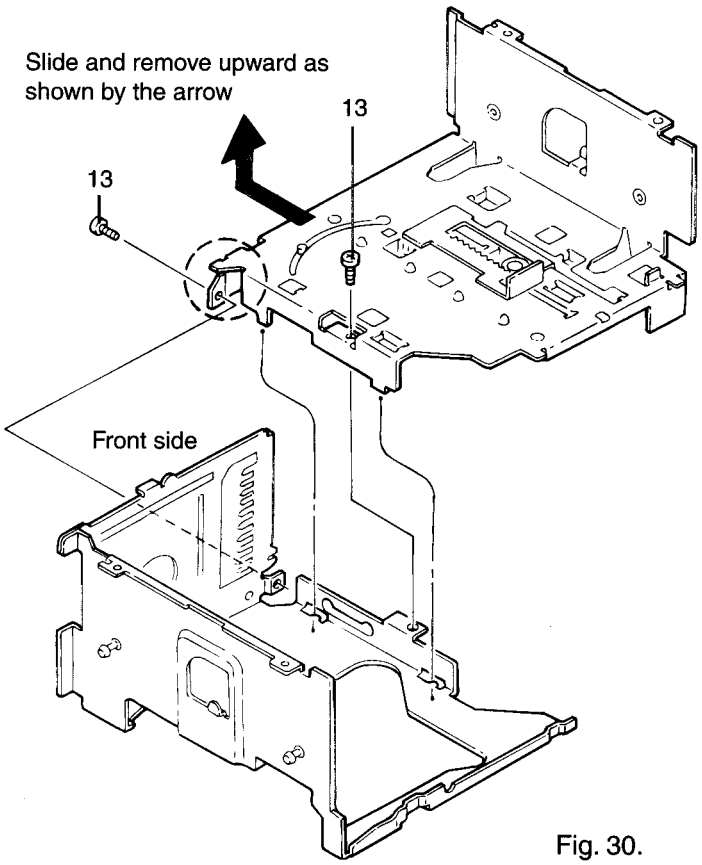


Fig. 30.

Precautions On Reassembling

When reassembling, also refer to the disassembling procedures.

Mounting the Traverse Mechanism

1. When mounting the pickup assembly, attach the feed slide shaft assembly to the traverse chassis.
   Apply E-JC-525 grease to the shaft.
2. Mount the middle gear and the feed slide shaft to the traverse chassis and secure them with the screw (14) through the shaft holder.
3. Before mounting the mechanism PCB assembly, move the pickup to the outer edge position, then secure the PCB assembly using the screw (15).
   At this time, check that the rest switch is correctly placed.
4. To mount the rack arm, first move the pickup to the middle position and secure it with the screws (16).

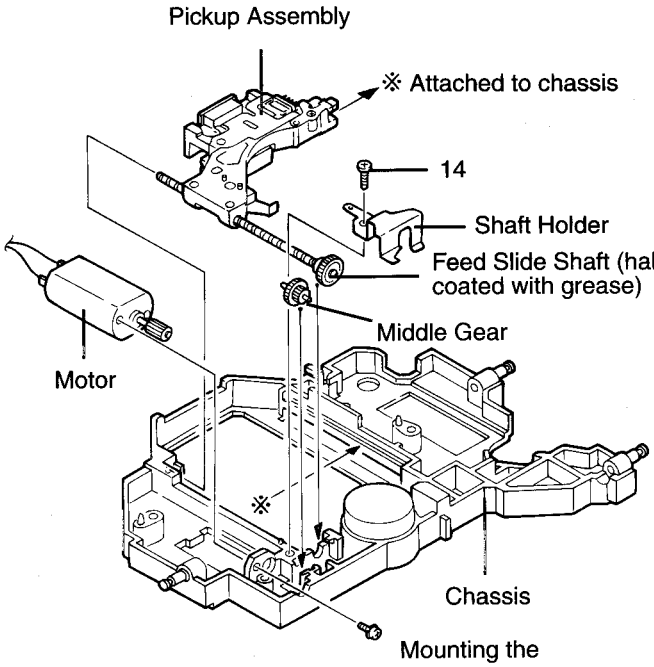


Fig. 31

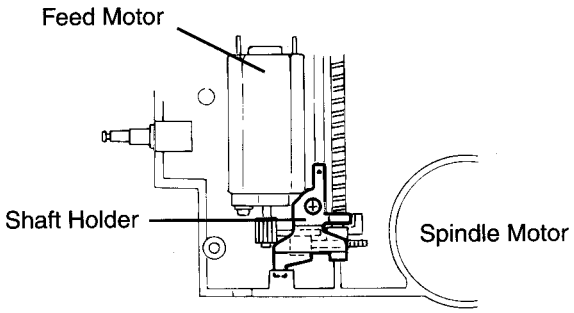


Fig. 32

Mechanism PCB Assembly

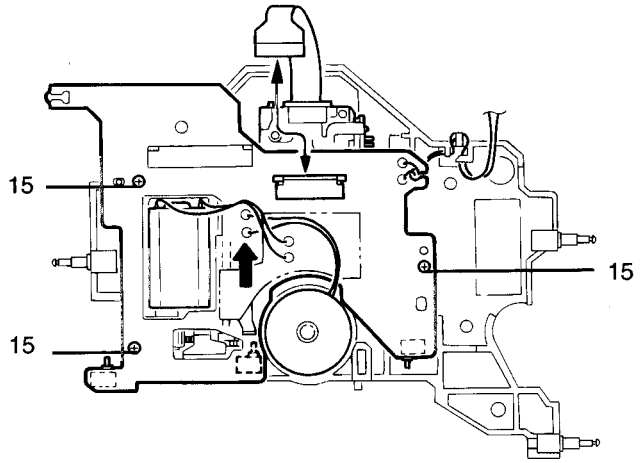


Fig. 33

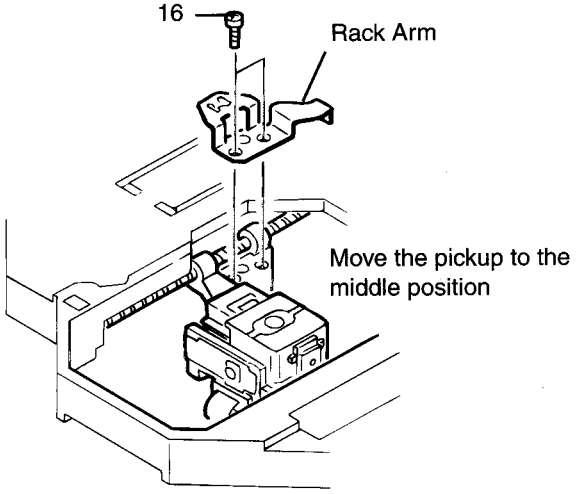


Fig. 34

Mounting the Lifter unit

1. Insert the shafts (B) of the traverse mechanism assembly into the slide grooves (F) on the lifter unit.
2. Shift the hook of the lifter unit to the edge, and shift the sliding lever inside the side bracket unit to the edge as well.
3. With each hole and lever shifted to the edge, mount the lifter unit and side bracket unit from the side.
   (Check each attached section, and check that the two shafts (C) of the lifter unit are correctly inserted into the holes (g) of the side bracket unit. After mounting, check that the levers move together.)
4. Turn the lifter unit upside down.
   As shown in Fig. 37, slide the lever 30 mm away from the edge, then mount the lifter bracket L assembly.

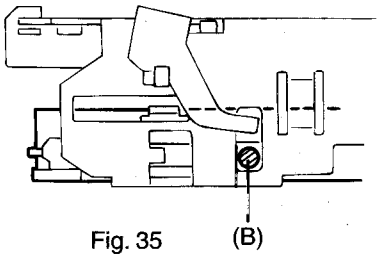


Fig. 35

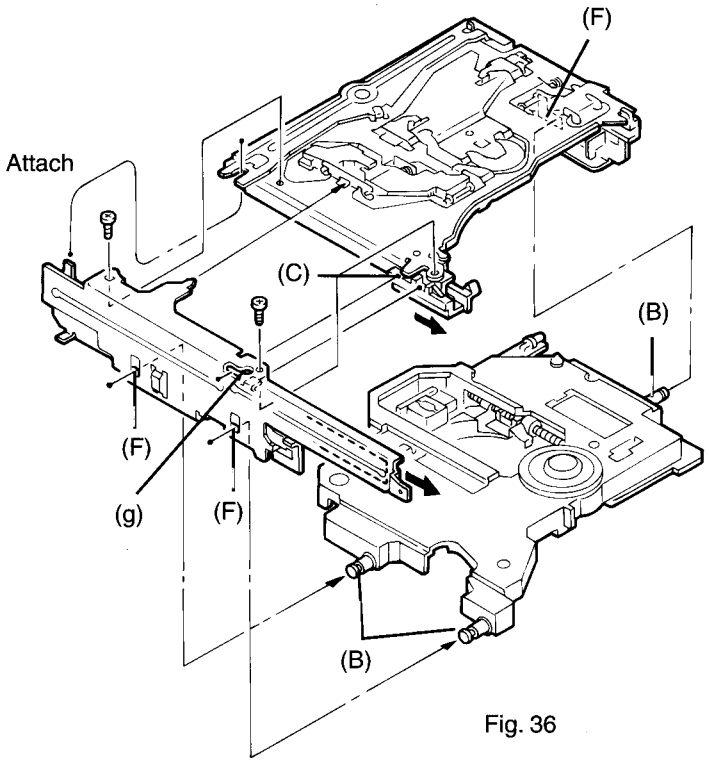


Fig. 36

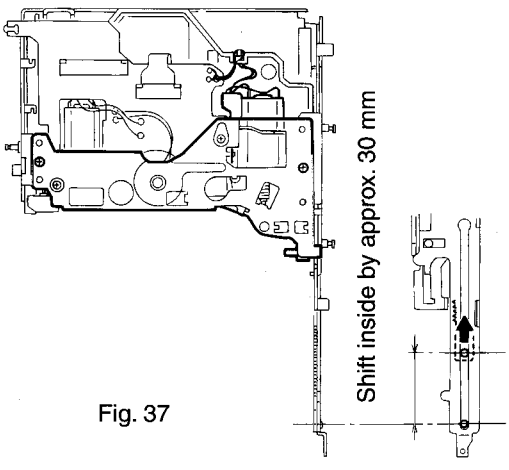


Fig. 37

Expanded View

Precautions On Reassembling

When reassembling, also refer to the disassembling procedures.

Mounting the Traverse Mechanism

1. When mounting the pickup assembly, attach the feed slide shaft assembly to the traverse chassis.
   Apply E-JC-525 grease to the shaft.
2. Mount the middle gear and the feed slide shaft to the traverse chassis and secure them with the screw (14) through the shaft holder.
3. Before mounting the mechanism PCB assembly, move the pickup to the outer edge position, then secure the PCB assembly using the screw (15).
   At this time, check that the rest switch is correctly placed.
4. To mount the rack arm, first move the pickup to the middle position and secure it with the screws (16).

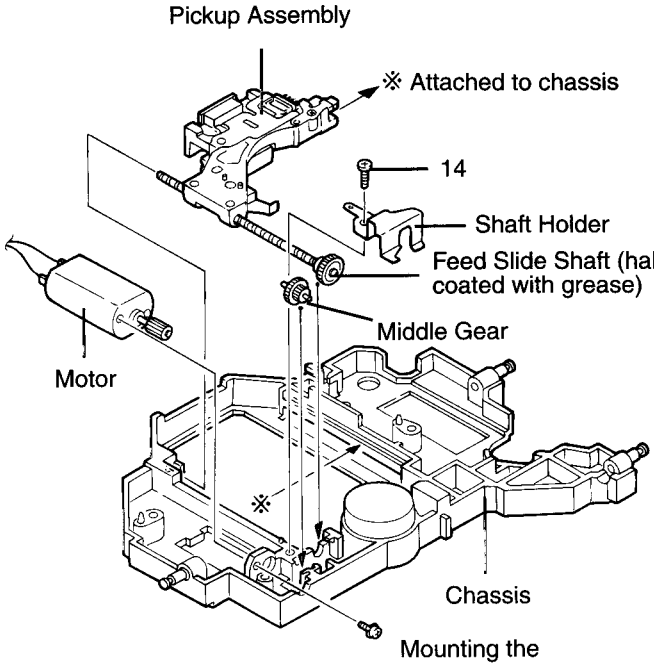


Fig. 31

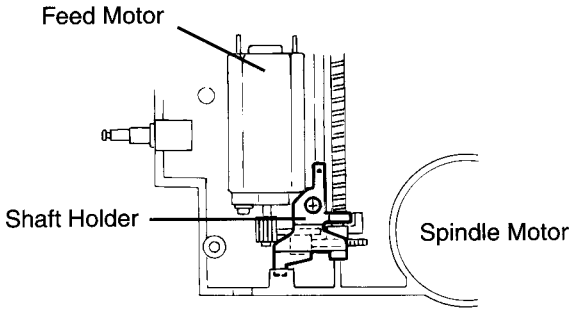


Fig. 32

Mechanism PCB Assembly

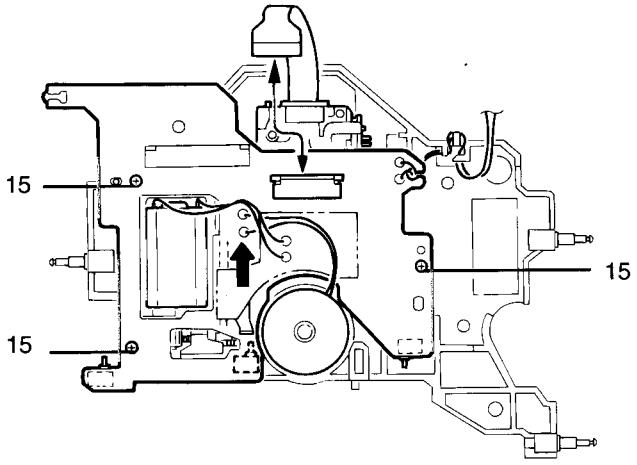


Fig. 33

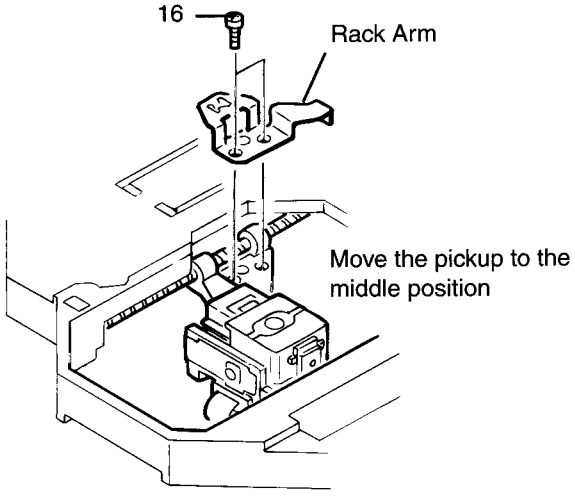


Fig. 34

Mounting the Top Plate

1. Mount the upper rod on the lifter side (j) and set it on the rear of the top plate, then mount the other end of the upper rod to (k).
2. Check that the five points (l, m, n, o and p) are correctly positioned.
   When mounting section (q), set it so that section (D) of the lifter unit is pinched by the bending section of the top plate.
3. Secure the top plate with six fixing screws (19).

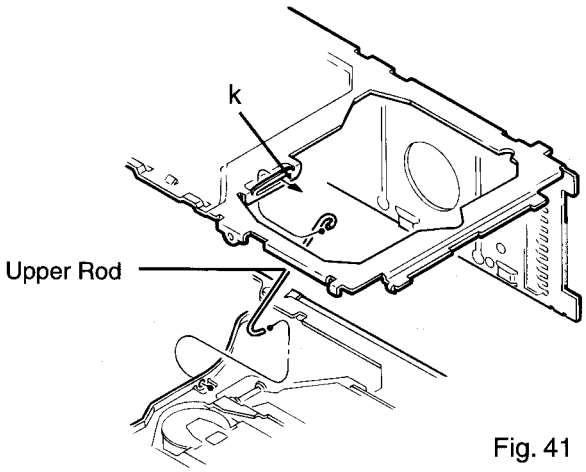


Fig. 41

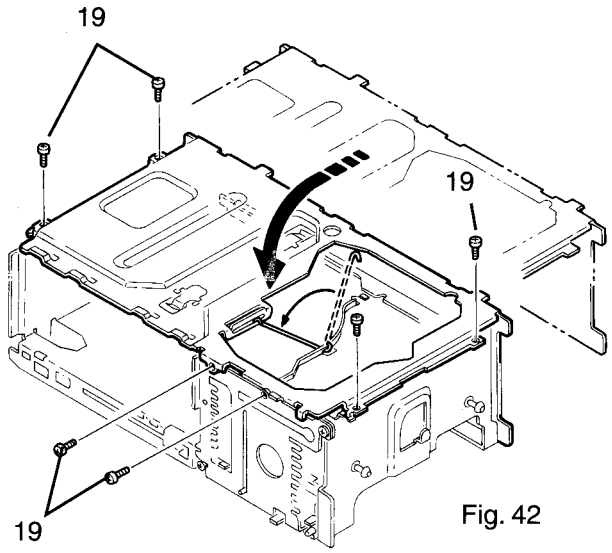


Fig. 42

Expanded view of mounting "q"

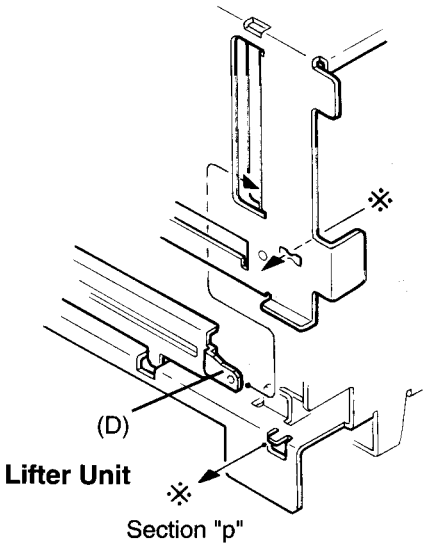


Fig. 43

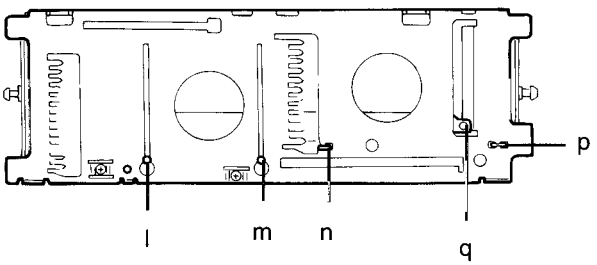


Fig. 44

Mounting the Front Slider and Rear Slider

1. Position the unit with the rear side facing down, then rotate the third gear in the direction of the arrow (clockwise) until the lift arm comes to the position at which the holes are exposed, as shown in Fig. 45-1.
2. Mount the front slider from the top.
   Rotate the third gear counterclockwise until the hole of the slider is lined up with the right hole of the stud, as shown in Fig. 45-2.
3. Mount the E-washer on the shaft.
4. Position the unit with the front side facing down, then mount the rear slider. Check that the (r), (s) and (t) positions are correctly mounted as shown in Fig. 46.
5. Rotate the third gear in the direction of the arrow (counterclockwise) until the lifter unit is at the top position.

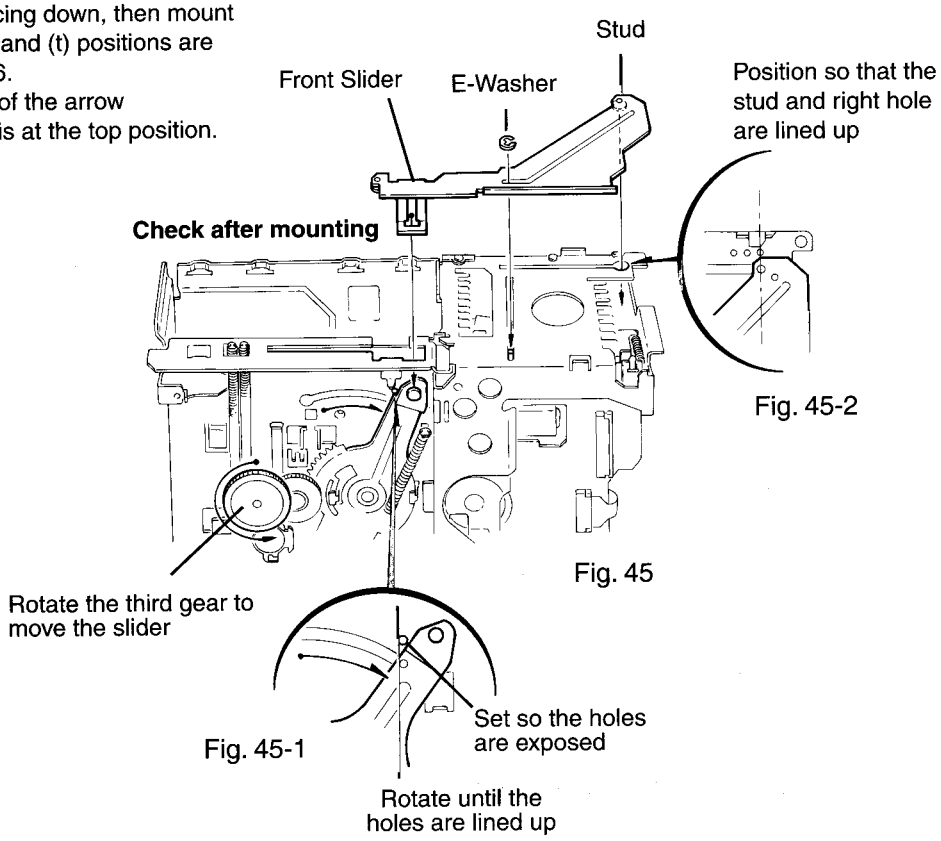

Stud
Front Slider
E-Washer
Position so that the stud and right hole are lined up
Check after mounting
Rotate the third gear to move the slider
Set so the holes are exposed
Rotate until the holes are lined up

Fig. 45-2

Fig. 45

Fig. 45-1

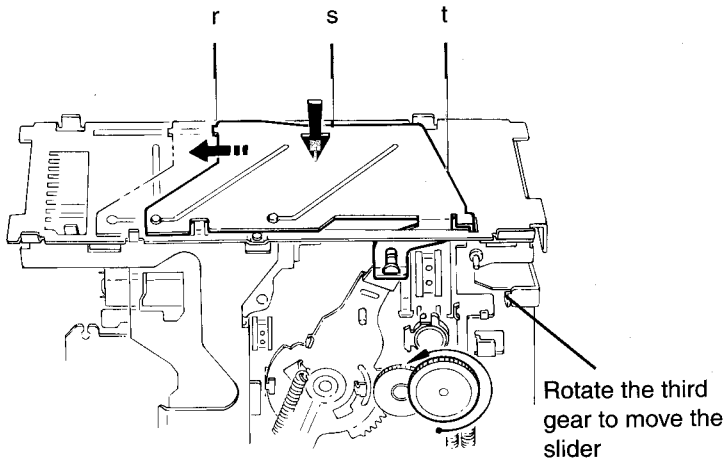


Fig. 46

Mounting the Sensor PCB Assembly

1. Attach the longer spring to the white resin, and attach the shorter spring temporarily to the sensor assembly bracket.
2. Mount the sensor assembly so that the shaft of the lift arm is inserted into the longer hole on the white resin located on the back of the sensor PCB assembly.
3. Attach the shorter spring to the hook of the lift arm.

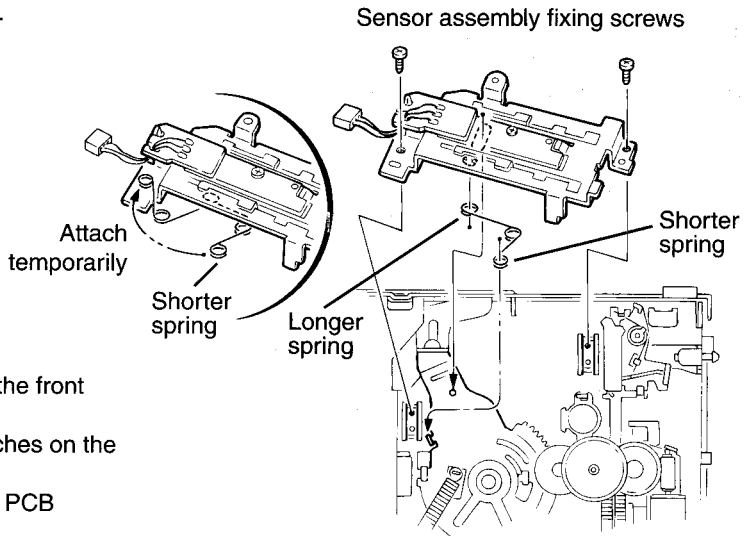


Fig. 47

Mounting the Main PC Board Assembly

1. Rotate the third gear clockwise until section (E) of the front slider and the third hole from the right are lined up.
   (Be sure to set properly. If incorrectly set, the switches on the PCB assembly may be damaged.)
2. After they are correctly positioned, mount the main PCB assembly.

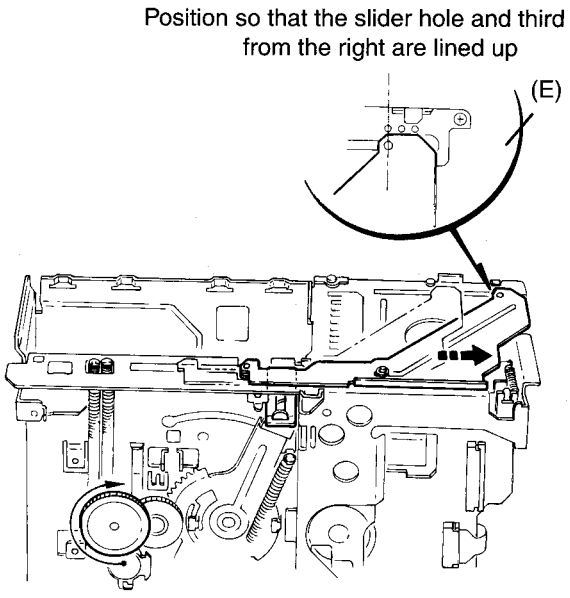


Fig. 48

Pickup Replacement Procedure

1. Remove the bottom cover, front panel and top cover from the exterior section.
2. Unplug the flexible ribbon wire from connector CN502 on the traverse mechanism PC board assembly.
3. Turn the rear slider and third gear in the lifter section counterclockwise until the traverse mechanism assembly is in the lowermost (bottom) position.
4. Unsolder the two wires (black and brown) connected to the tray motor.
5. Remove the two screws (1) from the round holes on the chassis R assembly to remove the lifter bracket (L).
6. Remove the lower rod.
7. Short-circuit the grounding point on the traverse mechanism PCB assembly of the lifter unit. Unsolder the wires connected to the spindle motor (red, black) and to the feed motor (blue, white) to lift the PCB assembly.
   Next, short-circuit the grounding point on the pickup main unit and unplug the pickup flexible PCB from CN501.
8. Remove the three fixing screws (2) from the round holes on the chassis R assembly to remove the traverse mechanism PCB assembly.
9. Remove the pickup shaft holder fixing screw (3) to remove the pickup assembly.

Note: When replacing the pickup, be sure to apply countermeasures against static electricity (grounding the operation table, wrist band and soldering iron). To remove it, first short-circuit the grounding point on the mechanism PCB, then lift the mechanism PCB assembly with CN501 connected. Next, short-circuit the grounding point on the pickup main unit, then unplug the pickup flexible PCB from connector CN501.

When reassembling, perform in the reverse order.

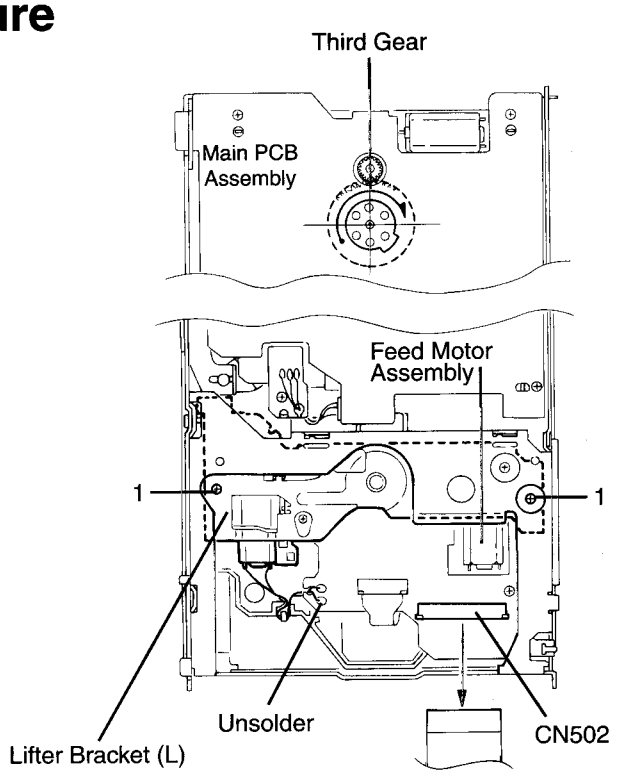


Fig. 49

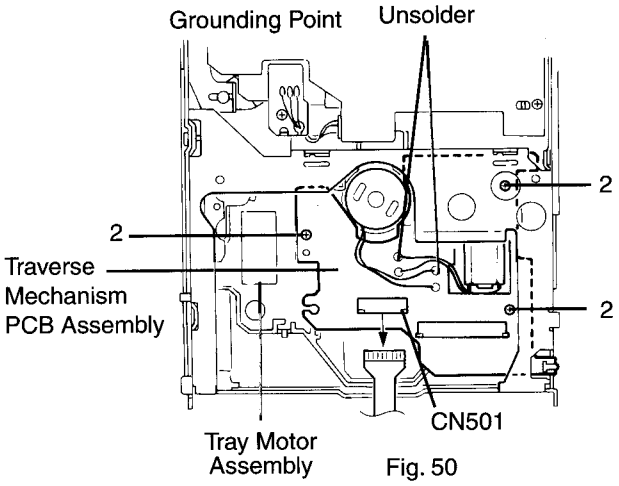


Fig. 50

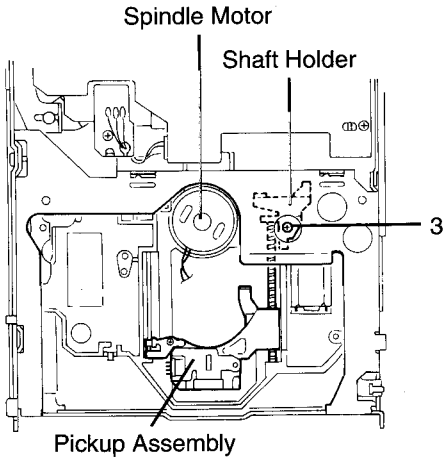


Fig. 51

10. Remove the two rack arm fixing screws (4).
    Pull out the feed slide shaft.
    Remove the shaft holder fixing screw (5).
11. When mounting the lifter bracket after replacing the pickup, shift the lifter unit lever approx. 30 mm towards the inside, then mount the lifter bracket.

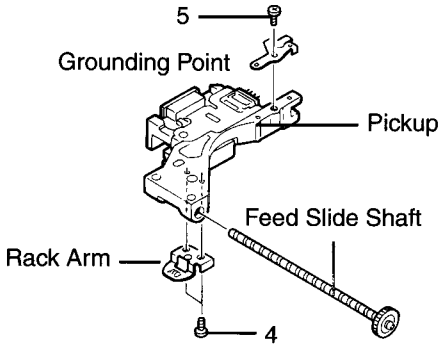


Fig. 52

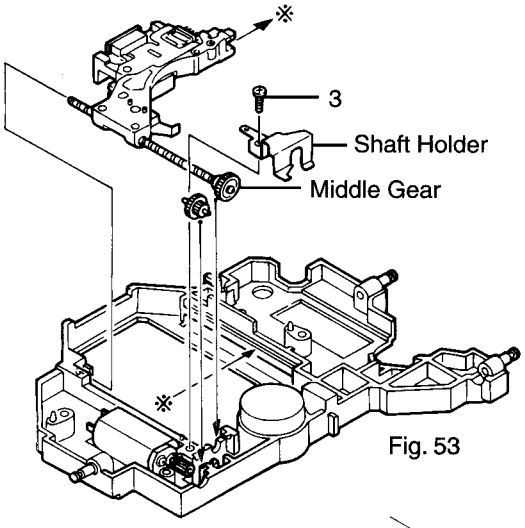


Fig. 53

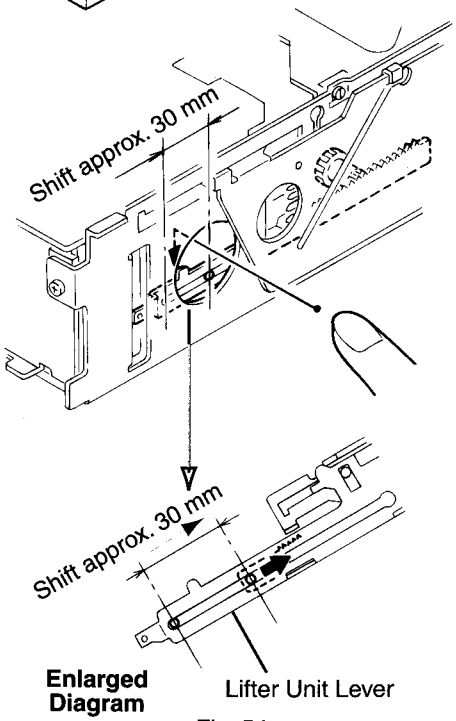
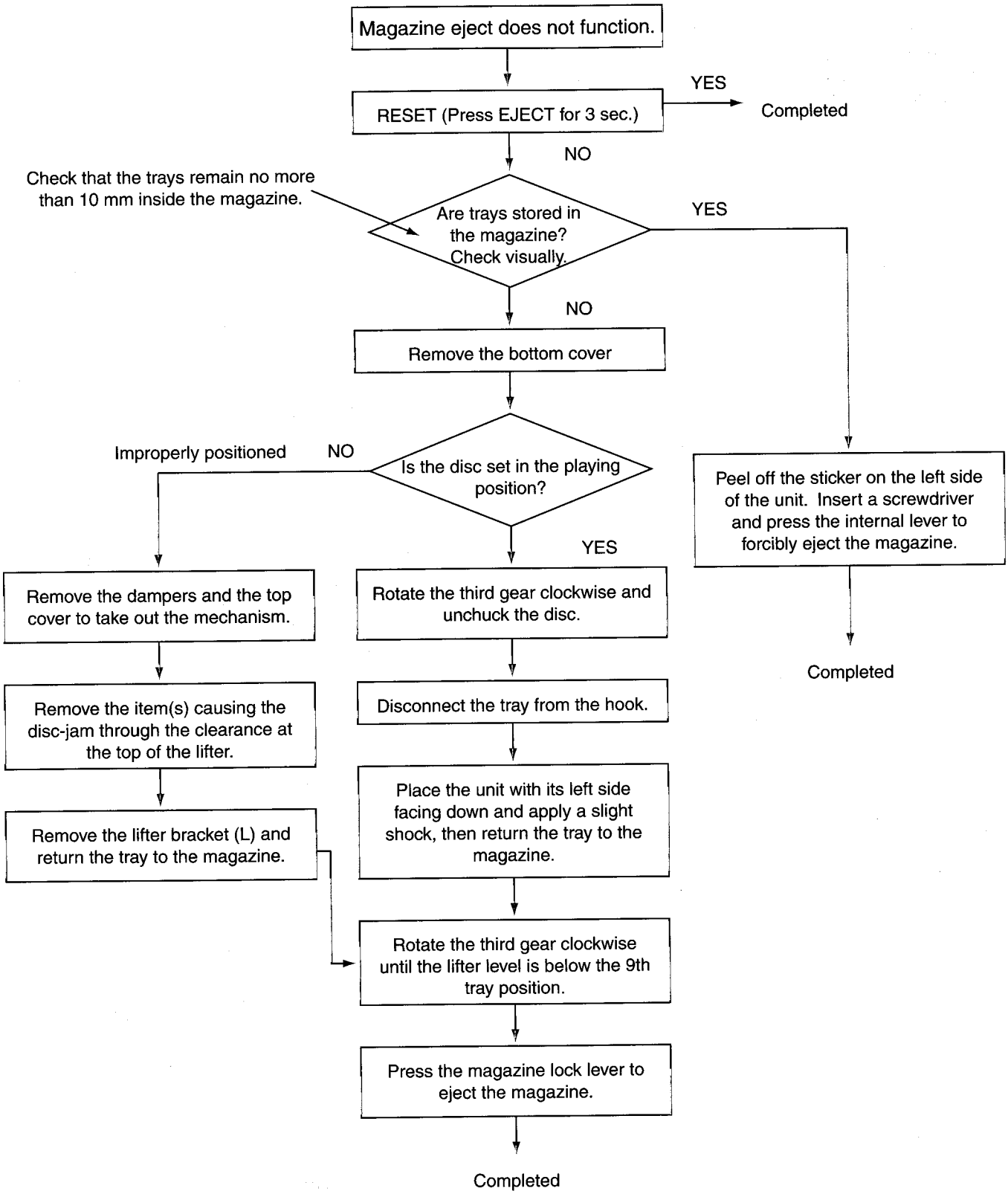


Fig. 54

JC12 Forced Eject Procedures


Magazine eject does not function.
RESET (Press EJECT for 3 sec.)
YES
Completed
NO
Check that the trays remain no more than 10 mm inside the magazine.
Are trays stored in the magazine? Check visually.
YES
NO
Remove the bottom cover
Improperly positioned
NO
Is the disc set in the playing position?
YES
Peel off the sticker on the left side of the unit. Insert a screwdriver and press the internal lever to forcibly eject the magazine.
Completed
Remove the dampers and the top cover to take out the mechanism.
Rotate the third gear clockwise and unchuck the disc.
Remove the item(s) causing the disc-jam through the clearance at the top of the lifter.
Disconnect the tray from the hook.
Remove the lifter bracket (L) and return the tray to the magazine.
Place the unit with its left side facing down and apply a slight shock, then return the tray to the magazine.
Rotate the third gear clockwise until the lifter level is below the 9th tray position.
Press the magazine lock lever to eject the magazine.
Completed

Troubleshooting

■Servicing Procedures for CH-X1200 Error Displays

Error display	Servicing Procedure
E1: Eject error	The magazine cannot be ejected until S601 (magazine switch) turns off. Can the magazine be ejected? YES→① , NO→② ① The magazine switch (S601) does not turn off even though the magazine is completely ejected. ② Check that the magazine is not engaged with the mechanism assembly.
E2: Position motor error	The lifter does not move up and down when exchanging or ejecting discs. After resetting, check whether or not the lifter moves.YES→③ , NO→④ ③ If the lifter exceeds the required disc position, check the lift position input. (IC601 pin 25) If the lifter does not reach the required disc position, check the mechanism (mainly the lifter elevation mechanism) ④ Check that voltage is present at the motor terminal. If voltage is present, check the lifter elevation mechanism. If voltage is not present, separate the motor from the circuit and check again whether or not voltage is present. If voltage is present, next check that the armature resistance of the position motor (resistance between motor terminals) is approx. 12Ω. If the resistance is excessively low (1 - 2Ω), the motor is defective.
E3: Tray motor error	Trays cannot be opened or closed when exchanging or ejecting discs. Does the tray move when changing or ejecting discs? YES→⑤ , NO→⑥ ⑤ Check that TRAY OUT SW (S602) and TRAY IN SW (S603) function correctly.

	S602 & IC601 pin (95)	S603 & IC601 pin (94)
When opening	H	L
When closing	L	H

⑥ Check that the drive voltage is applied to the motor terminal.
If the voltage is present, check the tray mechanism.
If the voltage is not present, separate the motor from the circuit and check again whether or not the voltage is present.

E4: Pick returning error	Does the feed (pickup unit) return to the inner area of the disc when ejecting? YES→⑦ , NO→⑧ , ⑨ ⑦ Check the rest switch. ⑧ If the feed gear is rotated, check the feed transfer mechanism ⑨ If the feed gear is not rotated, check the motor driver and the pattern.

Other errors occurring in the receiver or controller.

E8: Connection error	When selecting the CD Changer mode using function keys, etc., the unit does not enter the CD changer mode, or the E8 error display appears. This signifies trouble relating to communications. ⓐ Check the connection cables between the CD changer and the receiver (CD changer controller). ⓑ Check the CD changer power cord and the fuse (including F901 on the PC board). ⓒ Check IC651 and its peripheral circuits.

★The E1～E8 error displays described above may appear as E-1～E-8, 1E1～1E8, R-1～R-8, or RST1 ～RST8, depending on the product.

CH-X1200 Error Code

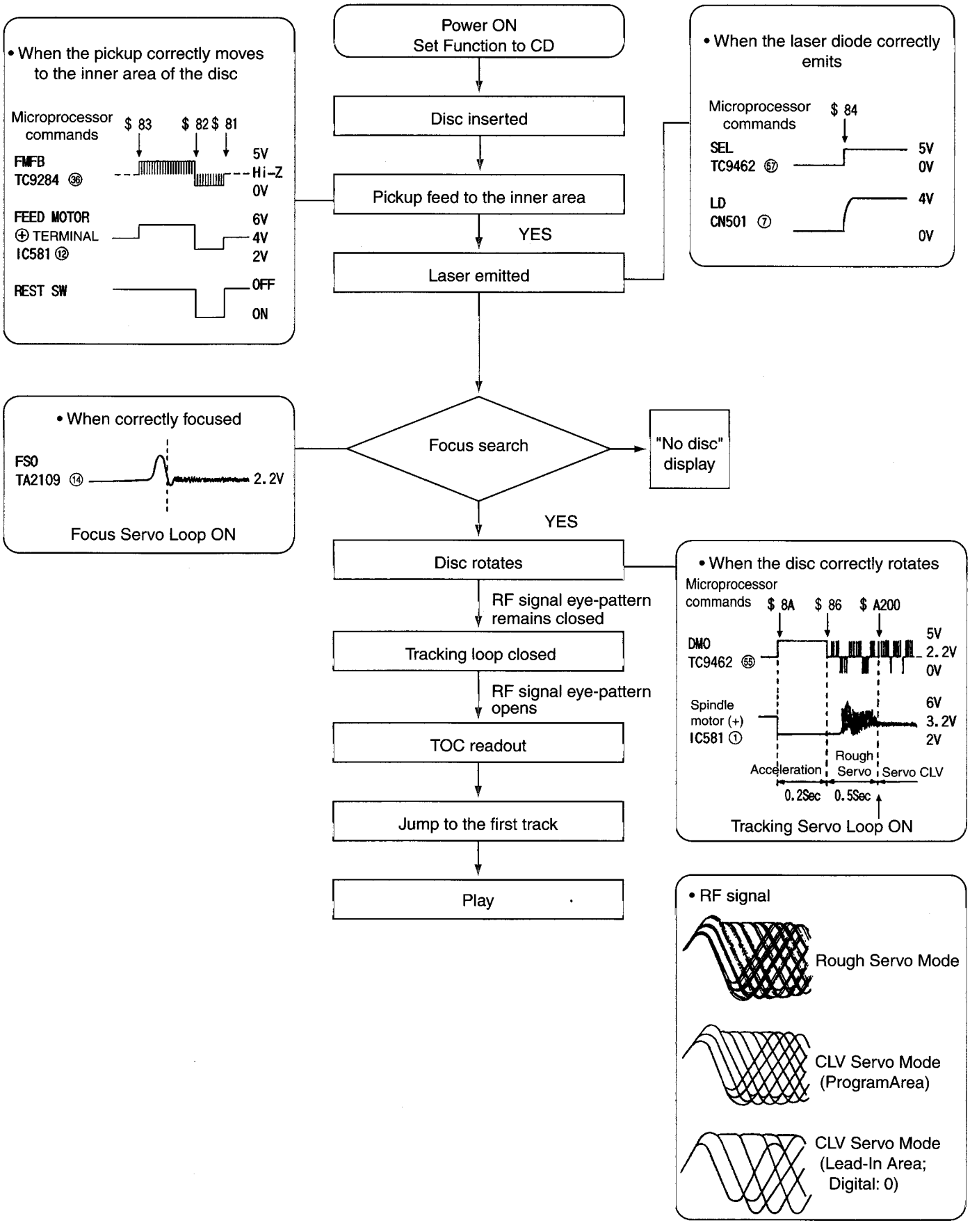
The following error codes can be displayed and stored in up to 3 memories when the KD-MX3000 is used with the controller. Refer to the KD-MX3000 service manual regarding error code indication.
The error code indication when using the earlier controller is the same as the CH-X99,KD-MK88 and other 12CD changer models.

CH-1 error code table

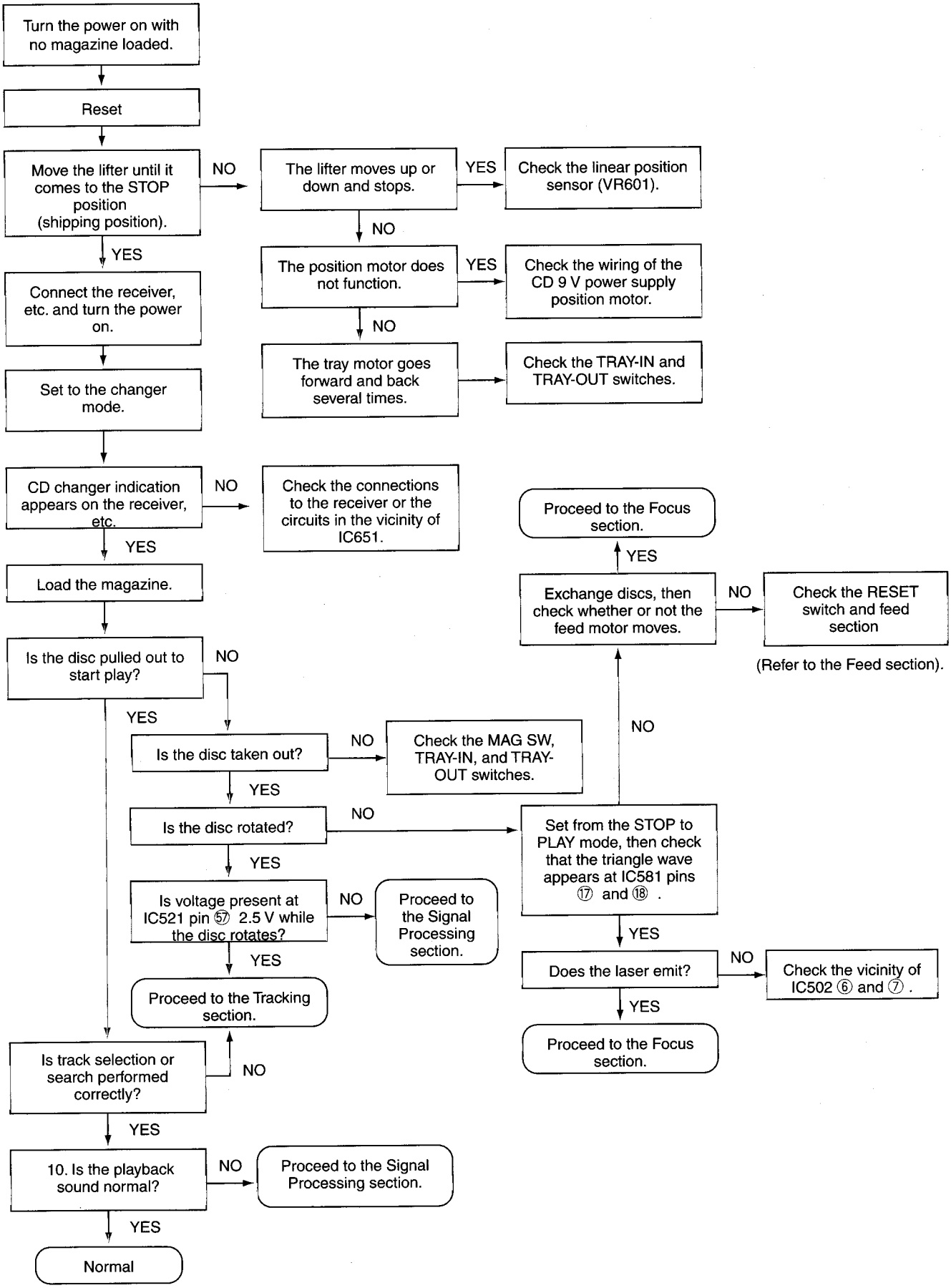
Generating condition		Description	Error code
Tray extension error	Tray-in switch time out (Tray-in switch Low, Tray-out switch High)	Tray stops part way	E1 03 00 11
	Tray-out switch time out (Tray-in switch High, Tray-out switch High)	Tray stops part way	E1 03 00 12
	Tray-in switch time out (Tray-in switch Low, Tray-out switch Low)	Tray-in switch faulty or other defect	E1 03 00 13
	MAG-in switch Low to High	Magazine removed when tray partly extende	E1 03 00 14
Tray retraction error	Tray-in switch time out (Tray-in switch Low, Tray-out switch Low)	Tray motor inoperative	E1 03 00 16
	Tray-out switch time out (Tray-in switch High, Tray-out switch High)	Tray retraction stops part way	E1 03 00 17
	Tray-in switch time out (Tray-in switch Low, Tray-out switch Low)	Tray-in switch faulty or other defect	E1 03 00 18
	MAG-in switch Low to High	Magazine removed when tray partly retracted	E1 03 00 19
Lifter raise error	Wait position time out	Position motor inoperative	E1 02 00 21
	Wait position time out	Position not stable in fine adjust mode	E1 02 00 22
	Wait position time out	Other fault	E1 02 00 23
Lifter lower error	Wait position time out	Position motor inoperative	E1 02 00 26
	Wait position time out	Position not stable in fine adjust mode	E1 02 00 27
	Wait position time out	Other fault	E1 02 00 28
Chuck error	Play position time out	Position motor inoperative	E1 02 00 31
	Play position time out	Position not stable in fine adjust mode	E1 02 00 32
	Play position time out	Other fault	E1 02 00 33
Unchuck error	Wait position time out	Position motor inoperative	E1 02 00 36
	Wait position time out	Position not stable in fine adjust mode	E1 02 00 37
	Wait position time out	Other fault	E1 02 00 38
Eject error	Eject position time out	Position motor inoperative	E1 02 00 41
	Eject position time out	Eject position not attained	E1 02 00 42
	MAG in switch time out	Magazine not ejected	E1 02 00 43
Initialize error	Mechanism switch time out	Both Tray-in and Tray-out Low	E1 03 00 46
	Absolute position time out	Not stable at absolute position	E1 03 00 47

Note: The 1st error code is indicated by E1, while the 2nd and 3rd error codes are respectively indicated by E2 and E3.

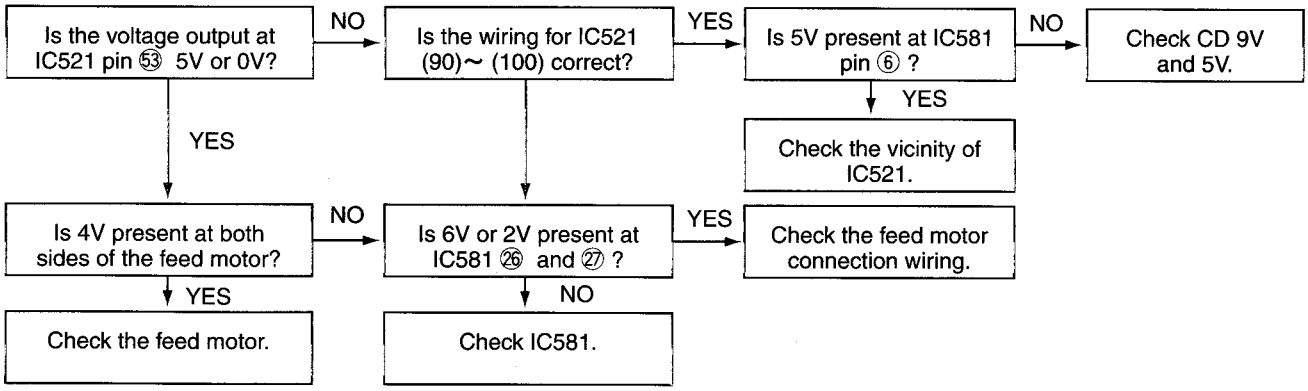
■Flow Chart for Reading TOC (Table of Contents)



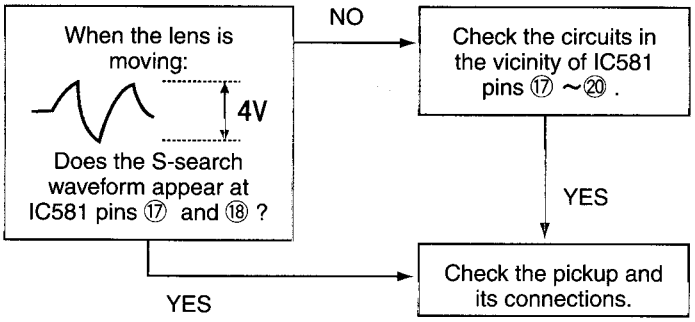
■General Section


Turn the power on with no magazine loaded.
Reset
Move the lifter until it comes to the STOP position (shipping position).
NO
The lifter moves up or down and stops.
YES
Check the linear position sensor (VR601).
NO
YES
The position motor does not function.
YES
Check the wiring of the CD 9 V power supply position motor.
NO
The tray motor goes forward and back several times.
Check the TRAY-IN and TRAY-OUT switches.
YES
Connect the receiver, etc. and turn the power on.
Set to the changer mode.
CD changer indication appears on the receiver, etc.
NO
Check the connections to the receiver or the circuits in the vicinity of IC651.
YES
Load the magazine.
Is the disc pulled out to start play?
NO
YES
Is the disc taken out?
NO
Check the MAG SW, TRAY-IN, and TRAY-OUT switches.
YES
Is the disc rotated?
NO
YES
Is voltage present at IC521 pin ⑤⑦ 2.5 V while the disc rotates?
NO
Proceed to the Signal Processing section.
YES
Proceed to the Tracking section.
Is track selection or search performed correctly?
NO
YES
10. Is the playback sound normal?
NO
Proceed to the Signal Processing section.
YES
Normal
NO
Set from the STOP to PLAY mode, then check that the triangle wave appears at IC581 pins ⑰ and ⑱ .
YES
Does the laser emit?
NO
Check the vicinity of IC502 ⑥ and ⑦ .
YES
Proceed to the Focus section.
YES
Proceed to the Focus section.
Exchange discs, then check whether or not the feed motor moves.
NO
Check the RESET switch and feed section
(Refer to the Feed section).

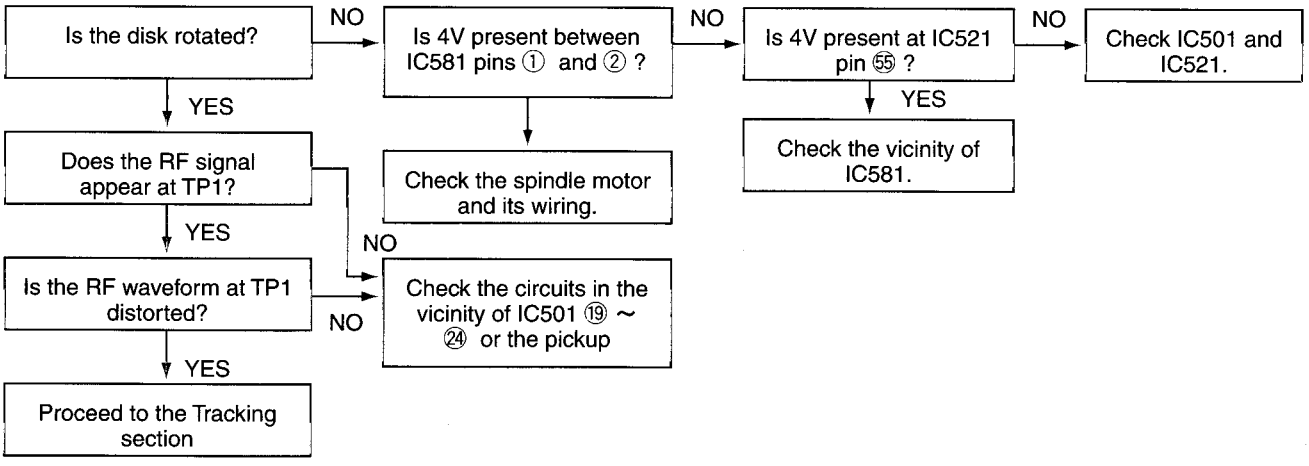
■Feed Section


Is the voltage output at IC521 pin ㊸ 5V or 0V?
NO
Is the wiring for IC521 (90)~ (100) correct?
YES
Is 5V present at IC581 pin ⑥ ?
NO
Check CD 9V and 5V.
YES
Check the vicinity of IC521.
YES
Is 4V present at both sides of the feed motor?
NO
Is 6V or 2V present at IC581 ㉖ and ㉗ ?
YES
Check the feed motor connection wiring.
YES
NO
Check the feed motor.
Check IC581.

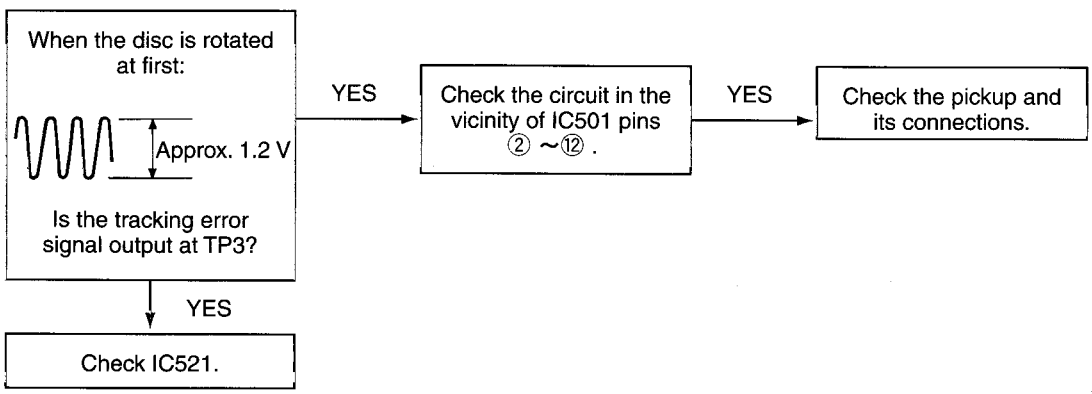
■Focus Section


When the lens is moving:
4V
Does the S-search waveform appear at IC581 pins ⑰ and ⑱ ?
NO
Check the circuits in the vicinity of IC581 pins ⑰ ~⑳ .
YES
YES
Check the pickup and its connections.

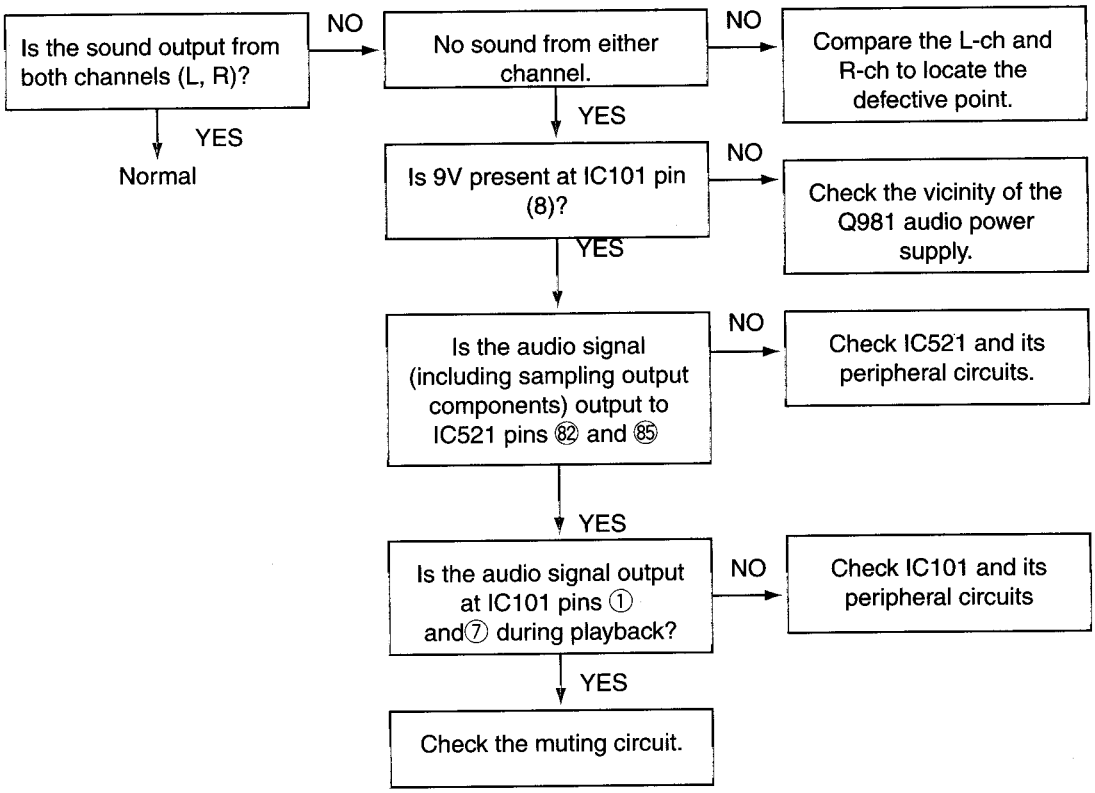
■Spindle Section


Is the disk rotated?
NO
Is 4V present between IC581 pins ① and ② ?
NO
Is 4V present at IC521 pin ㊺ ?
NO
Check IC501 and IC521.
YES
YES
Check the vicinity of IC581.
Does the RF signal appear at TP1?
Check the spindle motor and its wiring.
YES
NO
Is the RF waveform at TP1 distorted?
NO
Check the circuits in the vicinity of IC501 ⑲ ~ ㉔ or the pickup
YES
Proceed to the Tracking section

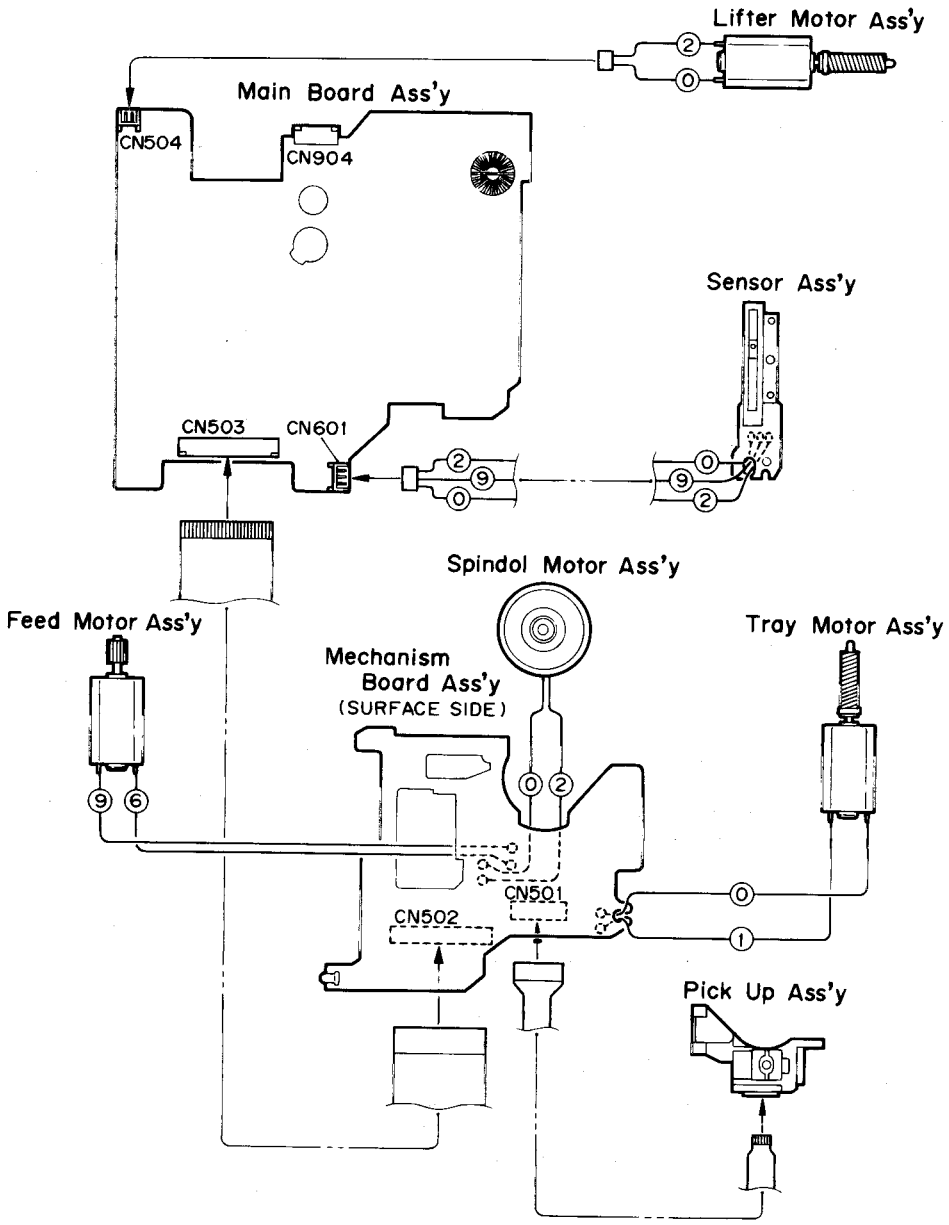
■Tracking Section


When the disc is rotated at first:
Approx. 1.2 V
Is the tracking error signal output at TP3?
YES
Check the circuit in the vicinity of IC501 pins ② ~⑫ .
YES
Check the pickup and its connections.
YES
Check IC521.

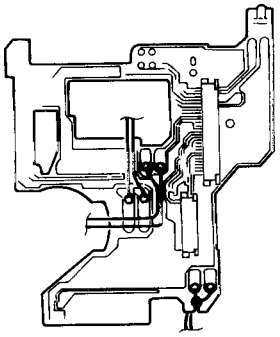
■Signal Processing Section


Is the sound output from both channels (L, R)?
NO
No sound from either channel.
NO
Compare the L-ch and R-ch to locate the defective point.
YES
Normal
YES
Is 9V present at IC101 pin (8)?
NO
Check the vicinity of the Q981 audio power supply.
YES
Is the audio signal (including sampling output components) output to IC521 pins ⑫ and ⑮
NO
Check IC521 and its peripheral circuits.
YES
Is the audio signal output at IC101 pins ① and⑦ during playback?
NO
Check IC101 and its peripheral circuits
YES
Check the muting circuit.

Wiring connections



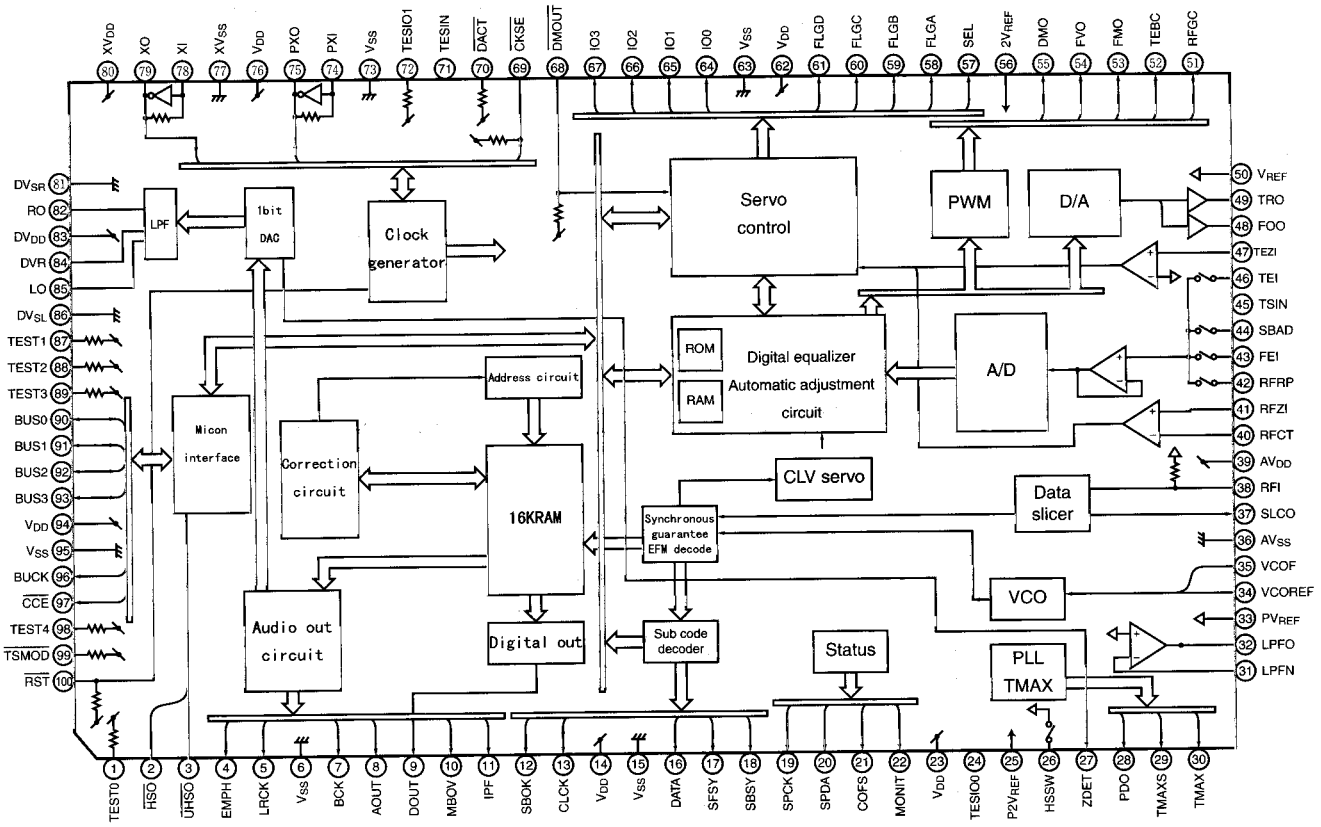
wiring of mecahnism board section



Description of Main ICs

■IC521 TC9462F

1.Block Diagram (TOP VIEW)



2.Pin function

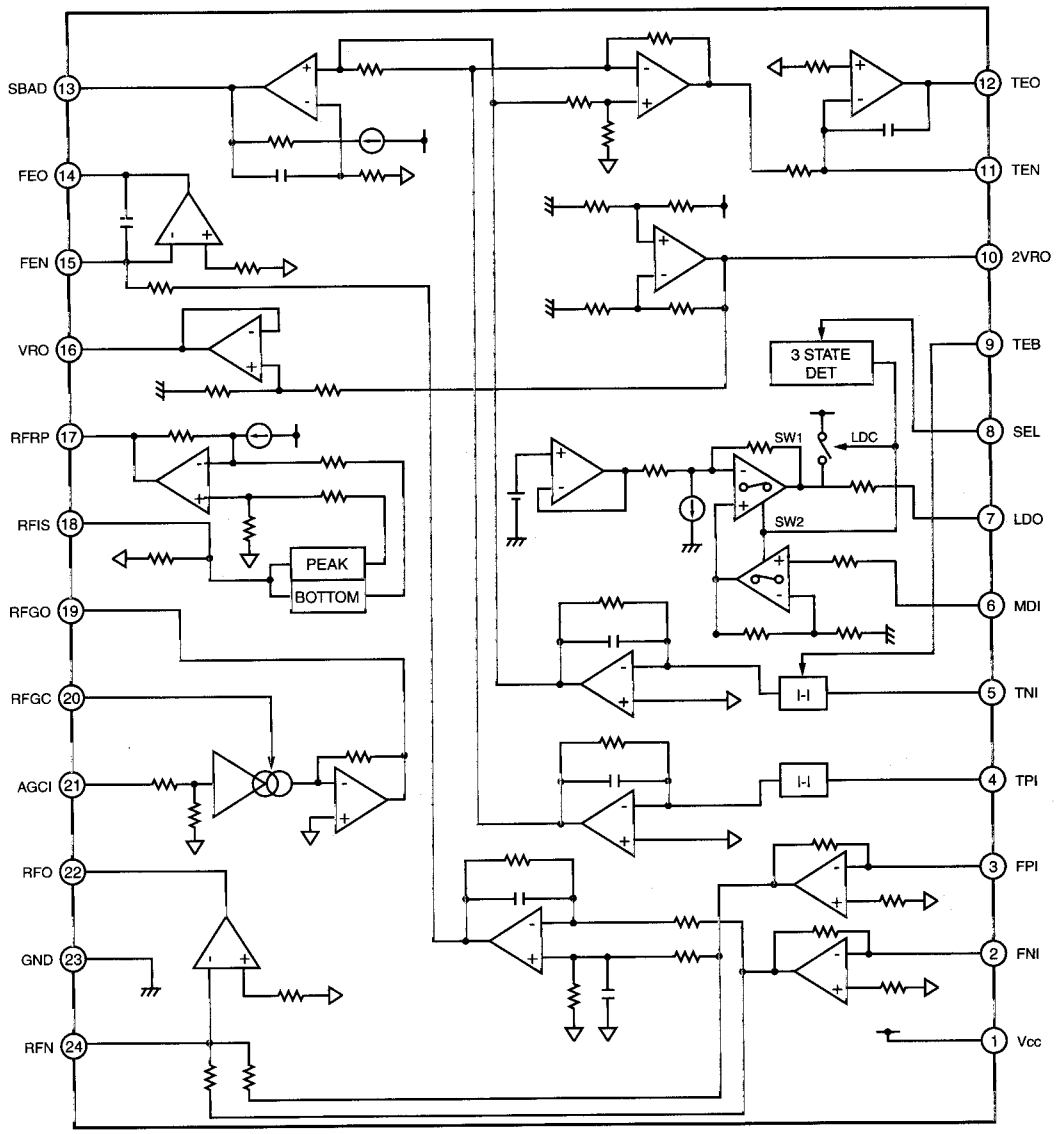
PIN No.	SYMBOL	I/O	FUNCTIONAL DESCRIPTION	REMARKS
1	TESTO	I	Test mode terminal.Normally, Keep at open.	With pull-up resistor.
2	$\overline{HSO}$	O	Playback speed mode filag output terminal.	–
3	$\overline{UHSO}$	O		
4	EMPH	O	Subcode Q data emphasis flag output terminal.Emphasis ON at "H" level and OFF at "L" level.The output polarity can invert by command.	–
5	LRCK	O	Channel clock output terminal.(44.1khz)L-ch at "L" level and R-ch at "H" level. the output polarity can invert by command.	–
6	VSS	–	Digital GND terminal.	–
7	BCK	O	Bit clock output terminal.(1.4122MHz)	–
8	AOUT	O	Audio data output terminal.	–
9	DOUT	O	Digital data output terminal.	–
10	MBOV	O	Buffer memory over signal output terminal. Over at "H" level.	–
11	IPF	O	Correction flag output terminal. At "H" level,AOUT output is made to correction impossibility by C2 correction processing.	–
12	SBOK	O	Subcode Q data CRCC check adjusting result output terminal. The adjusting result is OK at "H" level.	–
13	CLCK	I/O	Subcode P~W data reabout clock input/output terminal. This terminal can select by command bit.	–
14	VDD	–	Digital power supply voltage terminal.	–
15	VSS	–	Digital GND terminal.	–
16	DATA	O	Subcode P~W data output terminal.	–
17	SFSY	O	Play-back frame sync signal output terminal.	–
18	SBSY	O	Subcode block sync signal output terminal.	–
19	SPCK	O	Processor status signal reabout clock output terminal.	–
20	SADA	O	Processor status signal output terminal.	–
21	COFS	O	Correction frame clock output terminal. (7.35kHz)	–
22	MONIT	O	Internal signal (DSP internal flag and PLL clock) output terminal.Selected by command. This terminal output the text data with serial by command.	–
23	VDD	–	Digital power supply voltage terminal.	–
24	TESIOO	I	Test input/output terminal.Normally,keep at "L" level. The terminal that inputted the clock for read of text data by command.	–
25	P2VREF	–	PLL double reference voltage supply terminal.	–

$\overline{UHSO}$	$\overline{HSO}$	PLAYBACK SPEED
H	H	Nomal
H	L	2 times
L	H	4 times
L	L	–

PIN No.	SYMBOL	I/O	Function	Remarks
26	HSSW	O	2/4 times speed at "VREF" voltage.	2-state output.(PVREF,HiZ)
27	ZDET	O	1bit DA converter zero detect flag output terminal.	
28	PDO	O	Phase difference signal output terminal of EFM signal and PLCK signal.	3-state output.(P2VREF,PVREF,Vss)
29	TMAXS	O	TMAX detection result output terminal. Selected by command bit (TMPS).	3-state output.(P2VREF,PVREF,Vss)
30	TMAX	O	TMAX detection result output terminal. Selected by command bit (TMPS). DIFFERENCE RESULT / TMAX OUTPUT Longer than fixed freq. / "P2VREF" Shorter than fixed freq. / "VSS" Within than fixed freq. / "HiZ"	3-state output.(P2VREF,PVREF,Vss)
31	LPFN	I	LPF amplifier inverting input terminal for PLL.	Analog input.
32	LPFO	O	LPF amplifier output terminal for PLL.	Analog output.
33	PVREF	—	PLL reference voltage supply terminal.	
34	VCOREF	I	VCO center frequency reference level terminal. Normally, keep at "PVREF" level	
35	VCOF	O	VCO filter terminal.	Analog output.
36	AVSS	—	Analog GND terminal.	
37	SLCO	O	Data slice level output terminal.	Analog output.
38	RFI	I	RF signal input terminal.	Analog input.(Zin : selected by command)
39	AVDD	—	Analog power supply voltage terminal.	
40	RFCT	I	RFRP signal center level input terminal.	Analog input.(Zin : 50kΩ)
41	RFZI	I	RFRP zero cross input terminal.	Analog input.
42	RFRP	I	RF ripple signal input terminal.	Analog input.
43	FEI	I	Focus error signal input terminal.	Analog input.
44	SBAD	I	Sub-beam adder signal input terminal.	Analog input.
45	TSIN	I	Test input terminal.Normally, keep at "VREF" level.	Analog input.
46	TEI	I	Tracking error signal input terminal.Take in at tracking servo on.	Analog input.
47	TEZI	I	Tracking error zero cross input terminal.	Analog input.(Zin : 10kΩ)
48	FOO	O	Focus servo equalizer output terminal.	Analog output.(2VREF~AVss)
49	TRO	O	Tracking servo equalizer output terminal.	
50	VREF	—	Analog reference voltage supply terminal.	
51	RFGC	O	RF amplitude adjustment control signal output terminal.	3-state output. (2VREF,VREF,Vss) (PWM carrier=88.2kHz)
52	TEBC	O	Tracking balance control signal output terminal.	
53	FMO	O	Feed equalizer output terminal.	
54	FVO	O	Speed error signal or feed search equalizer output terminal.	
55	DMO	O	Disk equalizer output terminal. (PWM carrier=88.2kHz for DSP,Synchronize to PXO)	3-state output. (2VREF,VREF,Vss)
56	2VREF	—	Analog double reference voltage supply terminal.	
57	SEL	O	APC circuit ON/OFF indication signal output terminal. At the laser on time, UHF=L at "Hi-Z" level and UHF=H at "H" level.	
58	FLGA	O	Extemal flag output terminal for internal signal. Can select signal from TEZC,FOON,FOK and RFZC by command.	
59	FLGB	O	External flag output terminal for internal signal. Can select signal from DECT,FOON,FMON and RFZC by command.	
60	FLGC	O	Extemal flag output terminal for internal signal. Can select signal from TRON,TRSR,FOK and SRCH by command.	
61	FLGD	O	Extemal flag output terminal for internal signal. Can select signal from TRON,DMON,HYS and SHC by command.	
62	VDD	—	Digital power supply voltage terminal.	
63	VSS	—	Digital GND terminal.	
64	IO0	I/O	General I/O terminal. Can change over input port or output port by command. At the input mode time can reabout a state of terminal (H/L) by read command. At the output mode time can control a state of terminal (H/L/HiZ) by command.	
65	IO1			
66	IO2			
67	IO3			
68	$\overline{DMOUT}$	I	This terminal controls IO0~IO3 terminal. At "L" level time, IO0,1 out feed equalizer signal of 2-state PWM, IO2, 3 out disk equalizer signal of 2-state PWM.	With pull-up resistor.
69	$\overline{CKSE}$	I	Normally, keep at open.	With pull-up resistor.
70	$\overline{DACT}$	I	DAC test mode terminal. Normally, keep at open.	With pull-up resistor.
71	TESIN	I	Test input terminal. Normally, keep at "L" level.	Analog input.
72	TESIO1	I	Test input/output terminal. Normally, keep at "L" level.	Analog input.
73	VSS	—	Digital GND terminal.	
74	PXI	I	Crystal oscillator connecting input terminal for DSP. Normally, keep at "L" level.	
75	PXO	O	Crystal oscillator connecting output terminal for DSP.	
76	VDD	—	Digital power supply voltage terminal.	
77	XVSS	—	Oscillator GND terminal for system clock.	
78	XI	I	Crystal oscillator connecting input terminal for system clock.	
79	XO	O	Crystal oscillator connecting input terminal for system clock.	
80	XVDD	—	Oscillator power supply voltage terminal for system clock.	
81	DVSR	—	Analog GND terminal for DA converter. (R-ch)	
82	RO	O	R channel data forward output terminal.	
83	DVDD	—	Analog supply voltage terminal for DA converter.	
84	DVR	—	Reference terminal for DA converter.	
85	LO	O	L channel data forward output terminal.	
86	DVSL	—	Analog GND terminal for DA converter. (L-ch)	
87	TEST1	I	Test mode terminal. Normal, keep at open.	With pull-up resistor.
88	TEST2	I	Test mode terminal. Normal, keep at open.	With pull-up resistor.
89	TEST3	I	Test mode terminal. Normal, keep at open.	With pull-up resistor.
90	BUS0	I/O	Micon interface data input / output terminal.	Schmit input. With pull-up resistor.
91	BUS1	I/O		
92	BUS2	I/O		
93	BUS3	I/O		
94	VDD	—	Digital power supply voltage terminal.	
95	VSS	—	Digital GND terminal.	
96	BUCK	I	Micon interface clock input terminal.	Schmit input.
97	$\overline{CCE}$	I	Command and data sending / receiving chip enable signal input terminal. The bus line becomes active at "L" level.	Schmit input.
98	TEST4	I	Test mode terminal. Normal, keep at open.	With pull-up resistor.
99	$\overline{TSMOD}$	I	Local test mode selection terminal.	With pull-up resistor.
100	$\overline{RST}$	I	Reset signal input terminal. Reset at "L" level.	With pull-up resistor.

■IC501 TA2109F

1.Block Diagram



SEL	LDC		
	SW1	SW2	SW3
L	ON	OFF	OFF
Hiz	OFF	ON	ON
H	OFF	ON	ON

2.Function

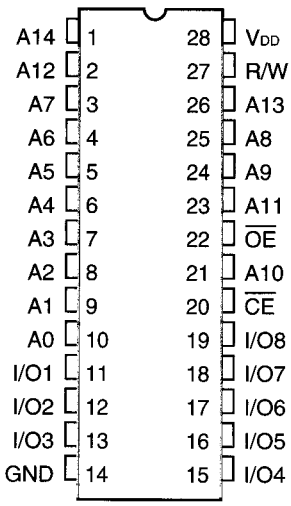
PIN No.	SYMBOL	I/O	Function
1	Vcc	—	Power supply input terminal
2	FNI	I	Main beam I-V amp. input terminal
3	FPI	I	Main beam I-V amp. input terminal
4	TPI	I	Sub beam I-V amp. input terminal
5	TNI	I	Sub beam I-V amp. input terminal
6	MDI	I	Monitor photo diode amp. input terminal
7	LDO	O	Laser diode amp. output terminal
8	SEL	I	Laser diode control signal input terminal and APC circuit ON/OFF control signal input terminal
9	TEB	I	Tracking error balance adjustment signal input terminal Controlled by 3PWM signal (PWM carrier=88.2khz)
10	2VRO	O	Reference voltage (2VREF) output terminal 2VREF=4.2V when Vcc=5V
11	TEN	I	TE amp. negative input terminal

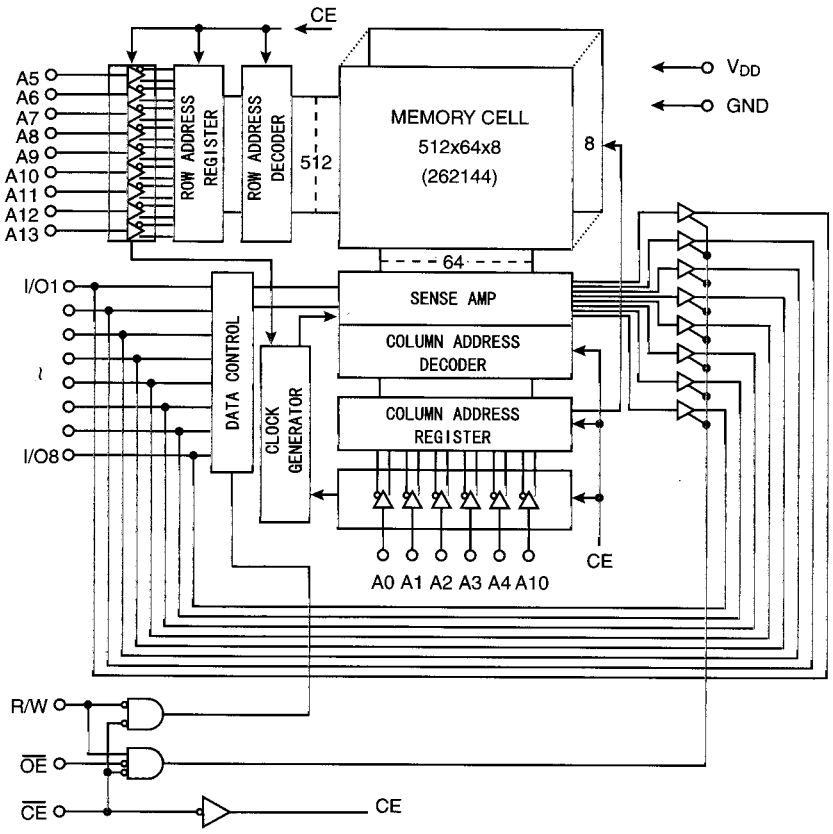
PIN No.	SYMBOL	I/O	Function
12	TEO	O	TE error signal output terminal
13	SBAD	O	Sub beam adder signal output terminal
14	FEO	O	Focus error signal output terminal
15	FEN	I	FE amp. negative input terminal
16	VRO	O	Reference voltage (VREF) output terminal VREF=2.1V when Vcc=5V
17	RFRP	O	Track count signal output terminal
18	RFIS	I	RFRP detect circuit input terminal
19	RFGO	O	RF gain signal output terminal
20	RFGC	I	RF amplitude adjustment control signal input terminal controlled by 3PWM signal
21	AGCI	I	RF signal amplitude adjustment amp. input terminal
22	RFO	O	RF signal output terminal
23	GND	—	Ground terminal
24	RFN	I	RF amp. negative input terminal

■IC603 TC55257DPL-L-3

1.Block Diagram

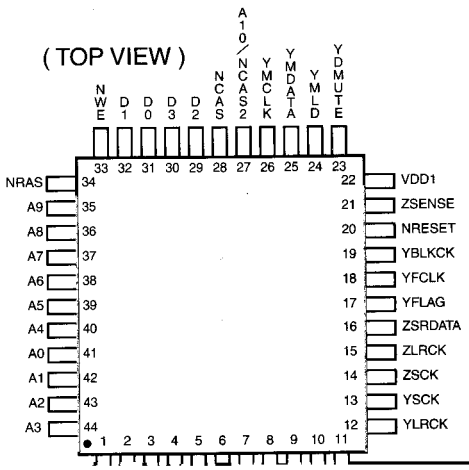
(TOP VIEW)



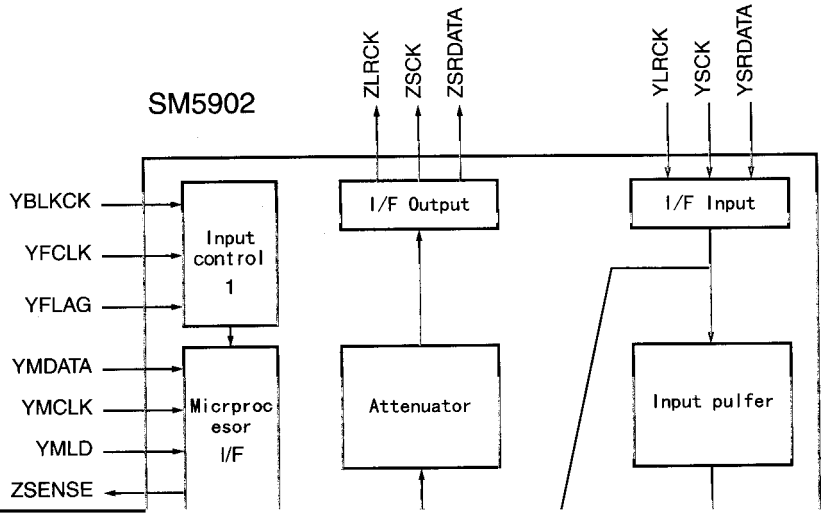


■IC701 SM5902AF

1.Treminal Layout

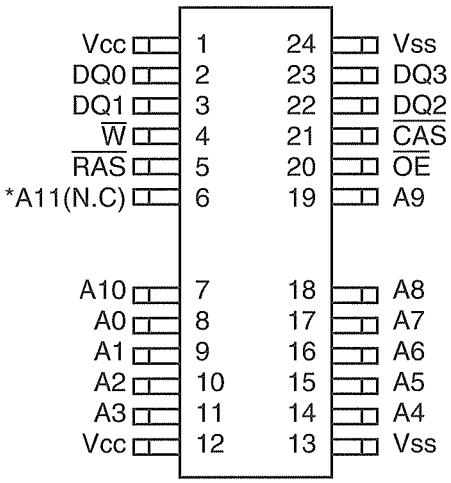


2.Block Diagram

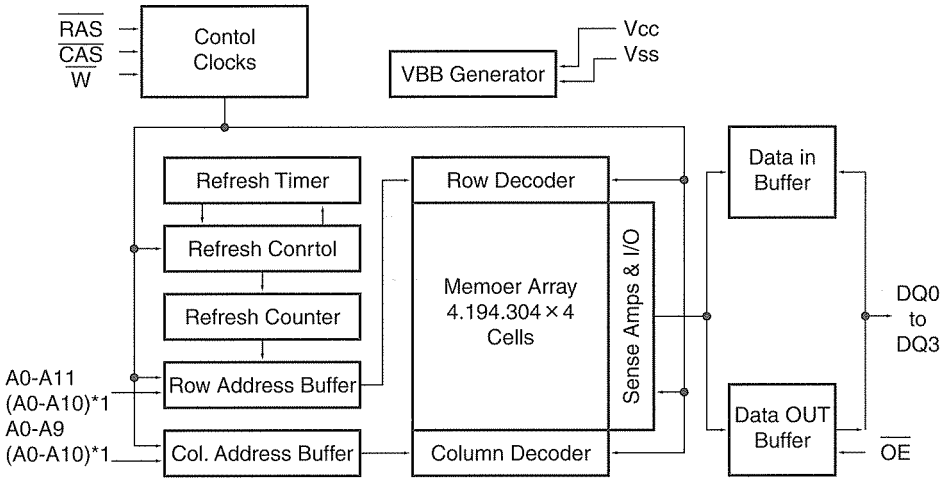


■IC702KM44C4104CS-L6

KM44C/V40(1)04CS



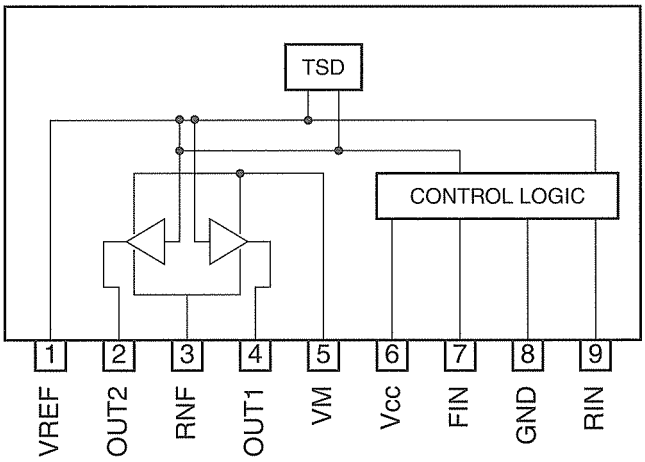
FUNCTIONAL BLOCK DIAGRAM



Note)*1 2K Refresh

■BA6956N

1.Block Diagram



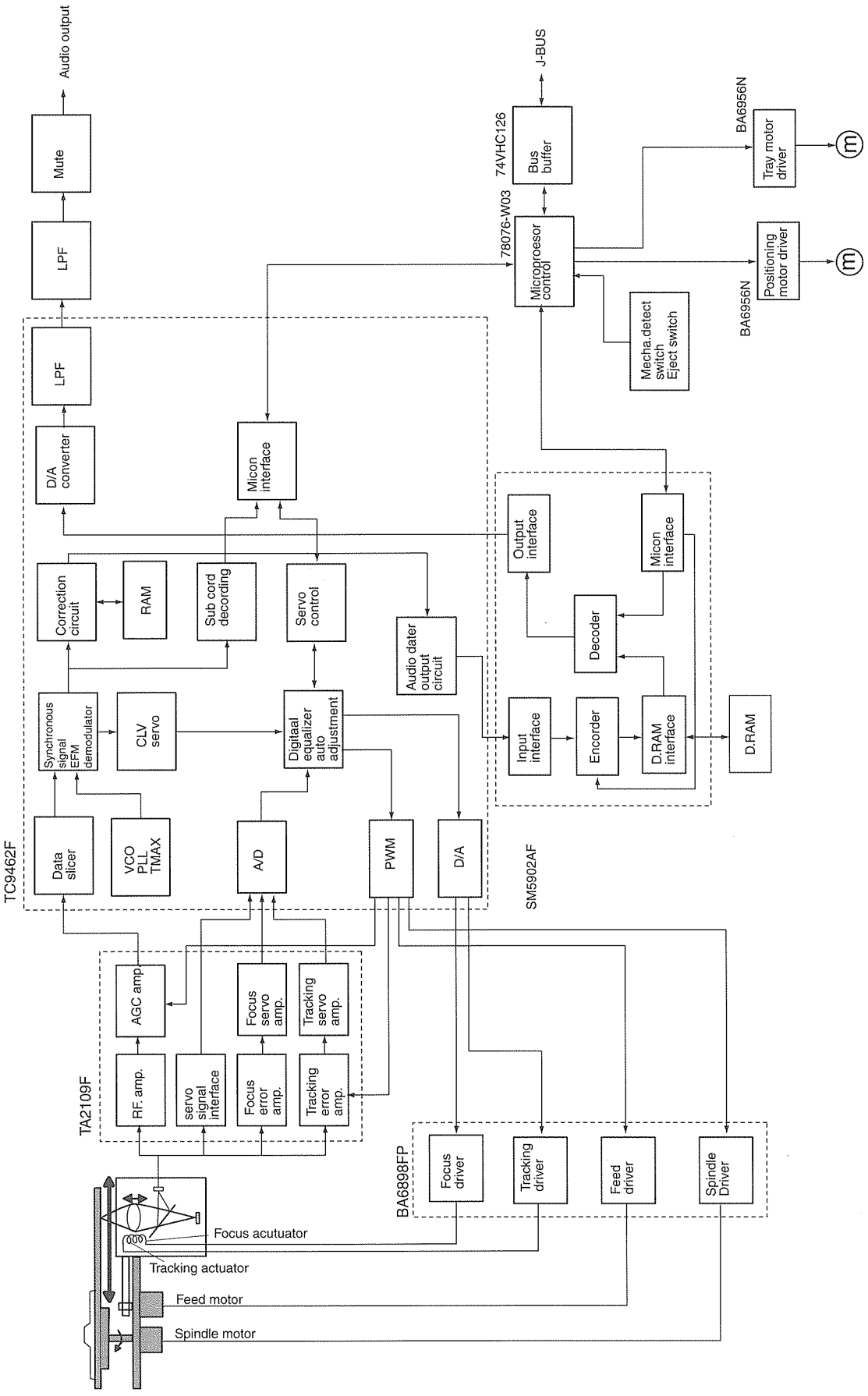
2.Functions

PIN No.	Terminal	Function
1	VREF	Output high voltage level control terminal
2	OUT2	Output terminal for motor
3	RNF	GND of driver division Terminal for Output currentde detection resistor
4	OUT1	Output terminal for motor
5	VM	Power supply for driver division
6	Vcc	Power supply for signal division
7	FIN	Input terminal for control logic
8	GND	GND
9	RIN	Input terminal for control logic

3.Input-Output truth value table

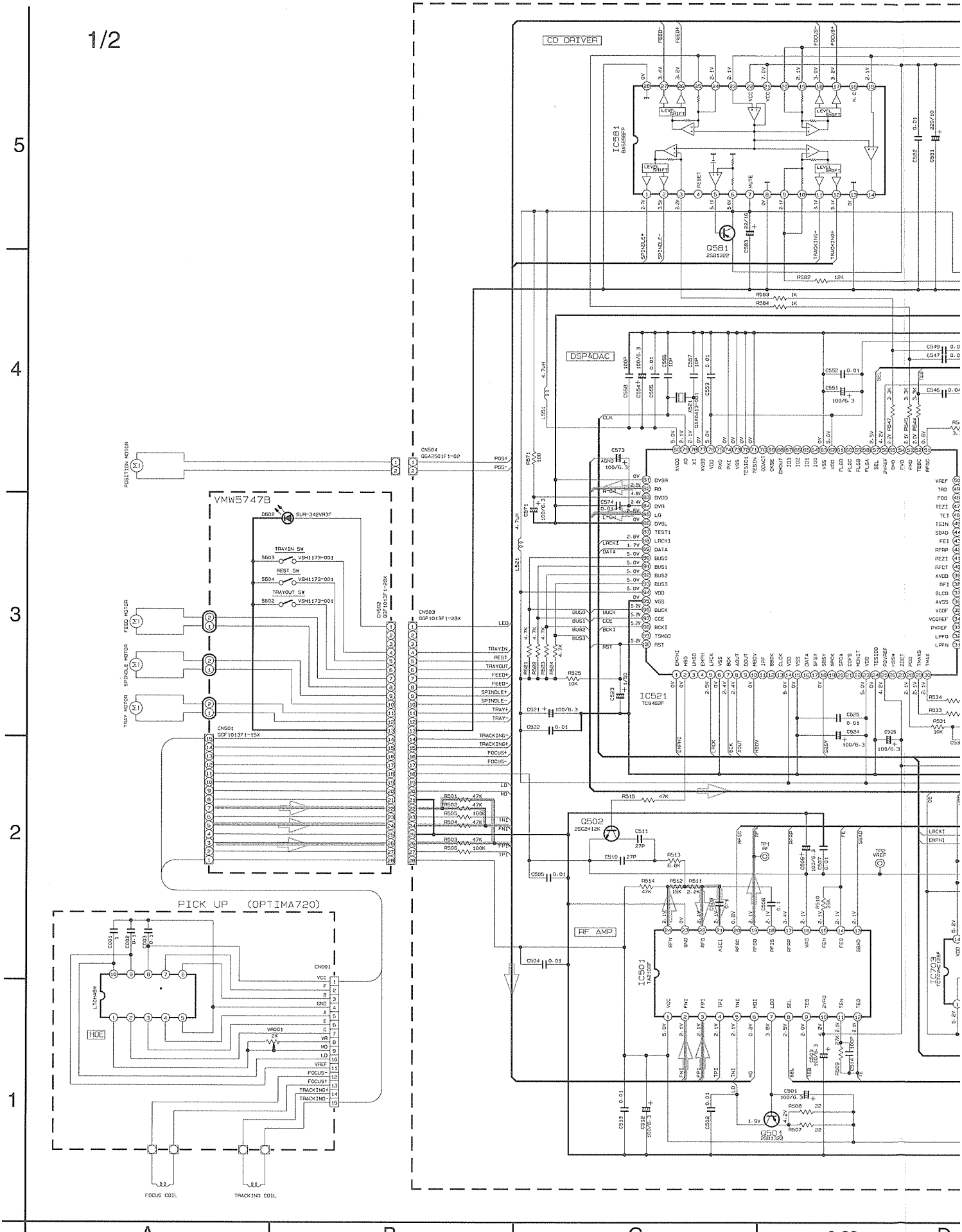
FIN	RIN	OUT1	OUT2	MODE
H	L	H	L	Forward rotation mode
L	H	L	H	Reverse rotation mode
H	H	L	L	Break Mode
L	L	OPEN	OPEN	Stand-by mode

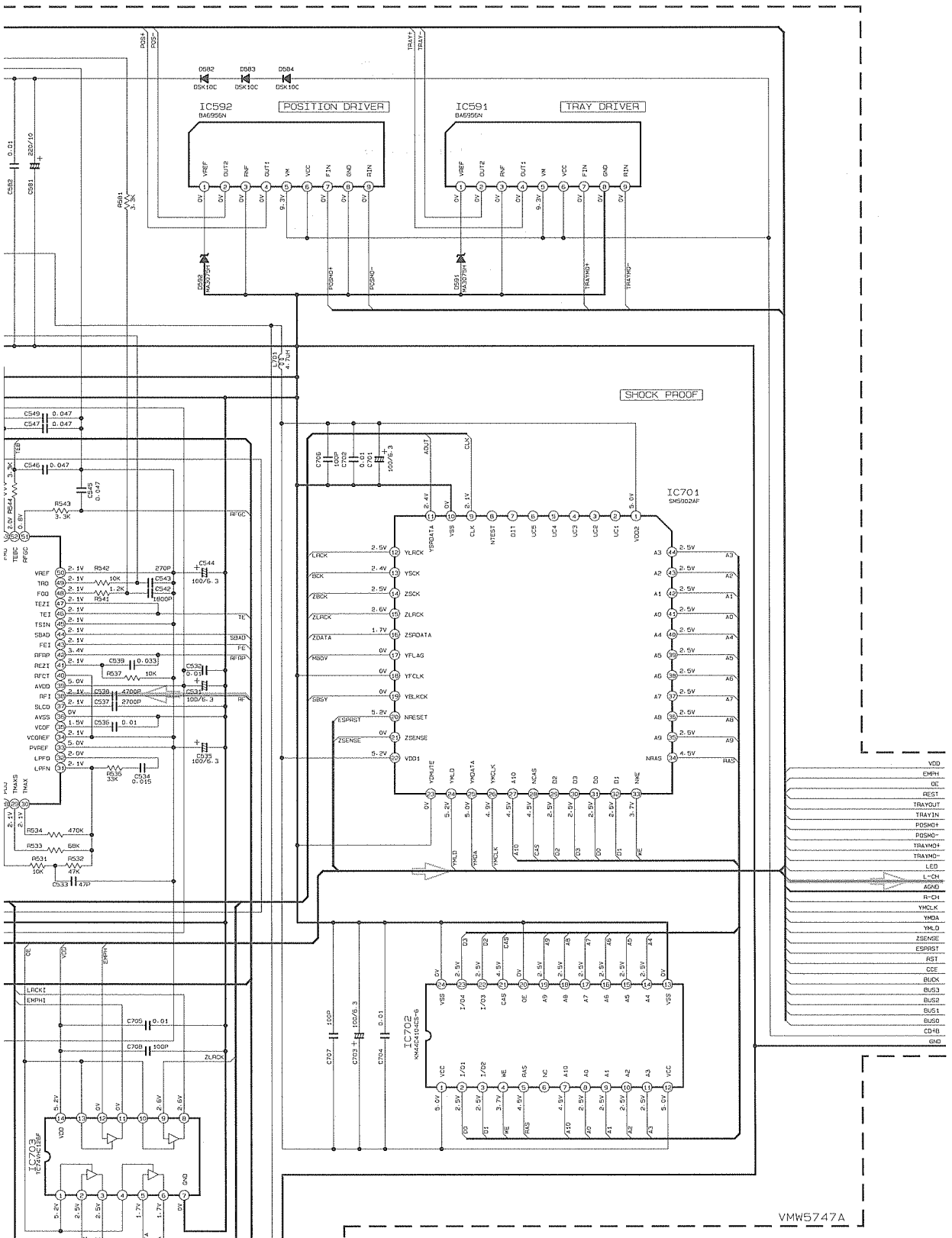
Block Diagram



Standard Schematic Diagrams

1/2



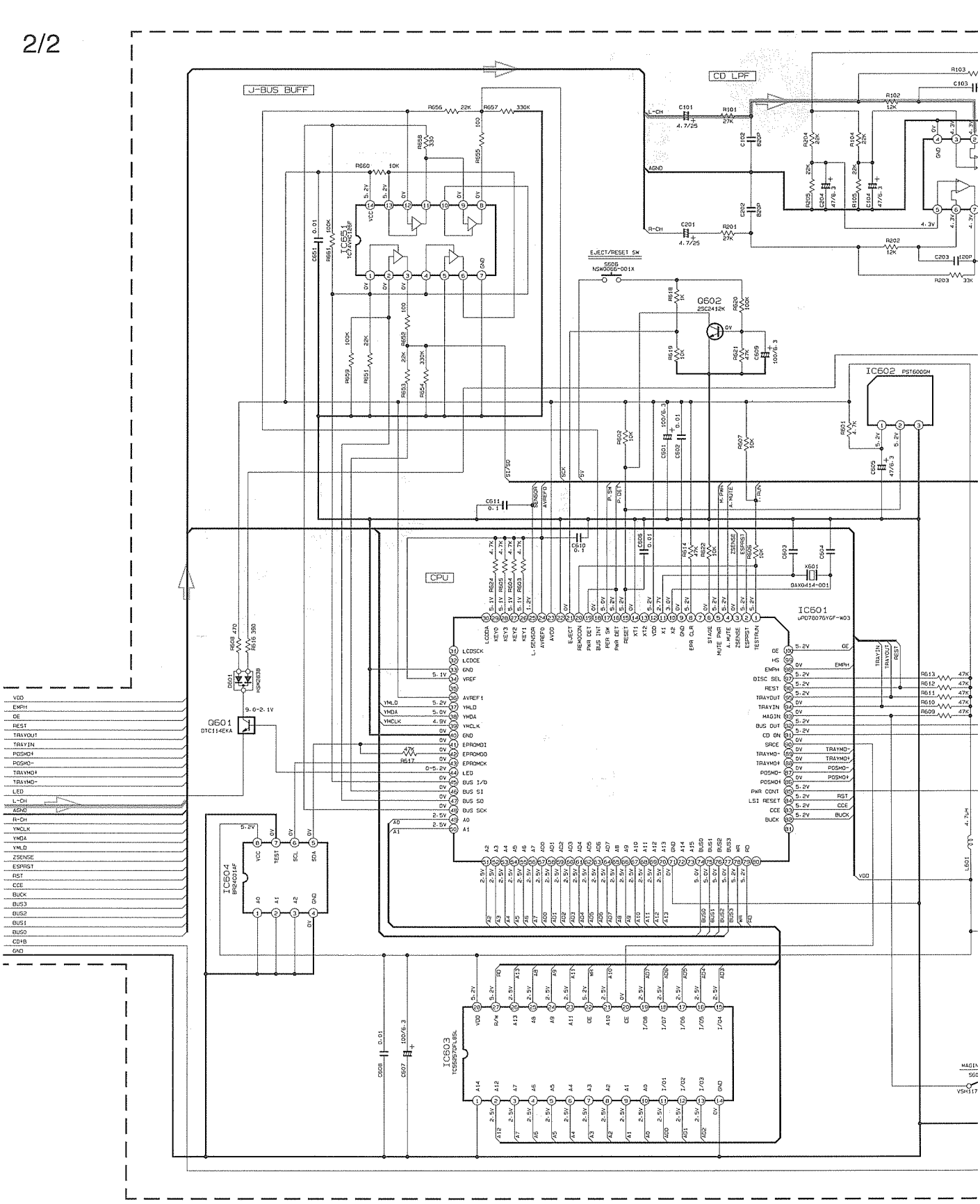


NOTES

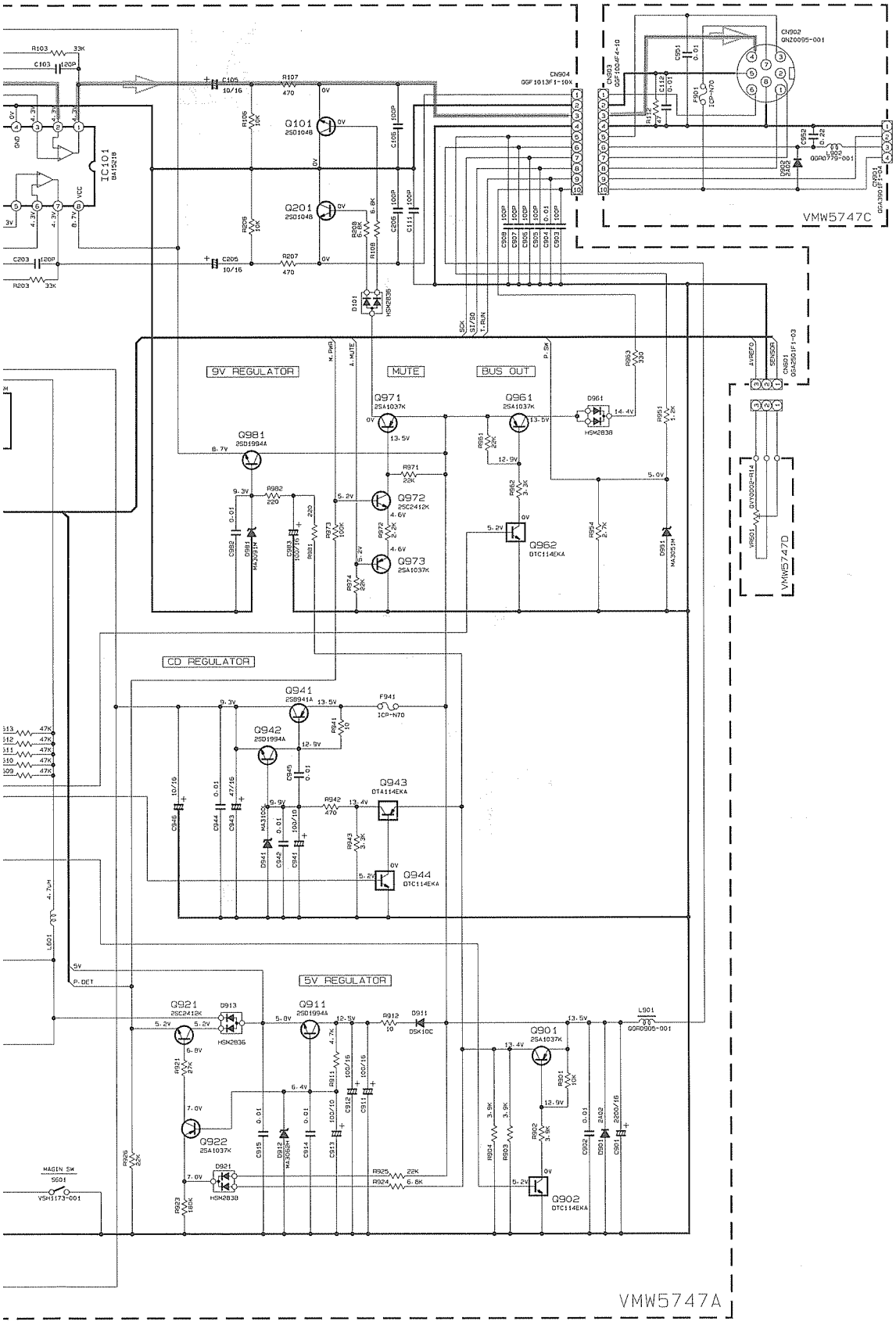
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL CONDITION---CD MODE.
2. UNLESS OTHERWISE SPECIFIED.
   ALL RESISTORS ARE 1/10W ±5% METAL GLAZE RESISTOR.
   ALL CAPACITORS ARE 50V OR 25V CERAMIC CAPACITOR.
   ALL RESISTANCE VALUES ARE IN OHM.
   ALL CAPACITANCE VALUES ARE IN uF(P=pF)
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(uF)/RATED VOLTAGE(V)

⇨ CD SIGNAL

D E F G H



Note VDH3870-001AV



CD SIGNAL

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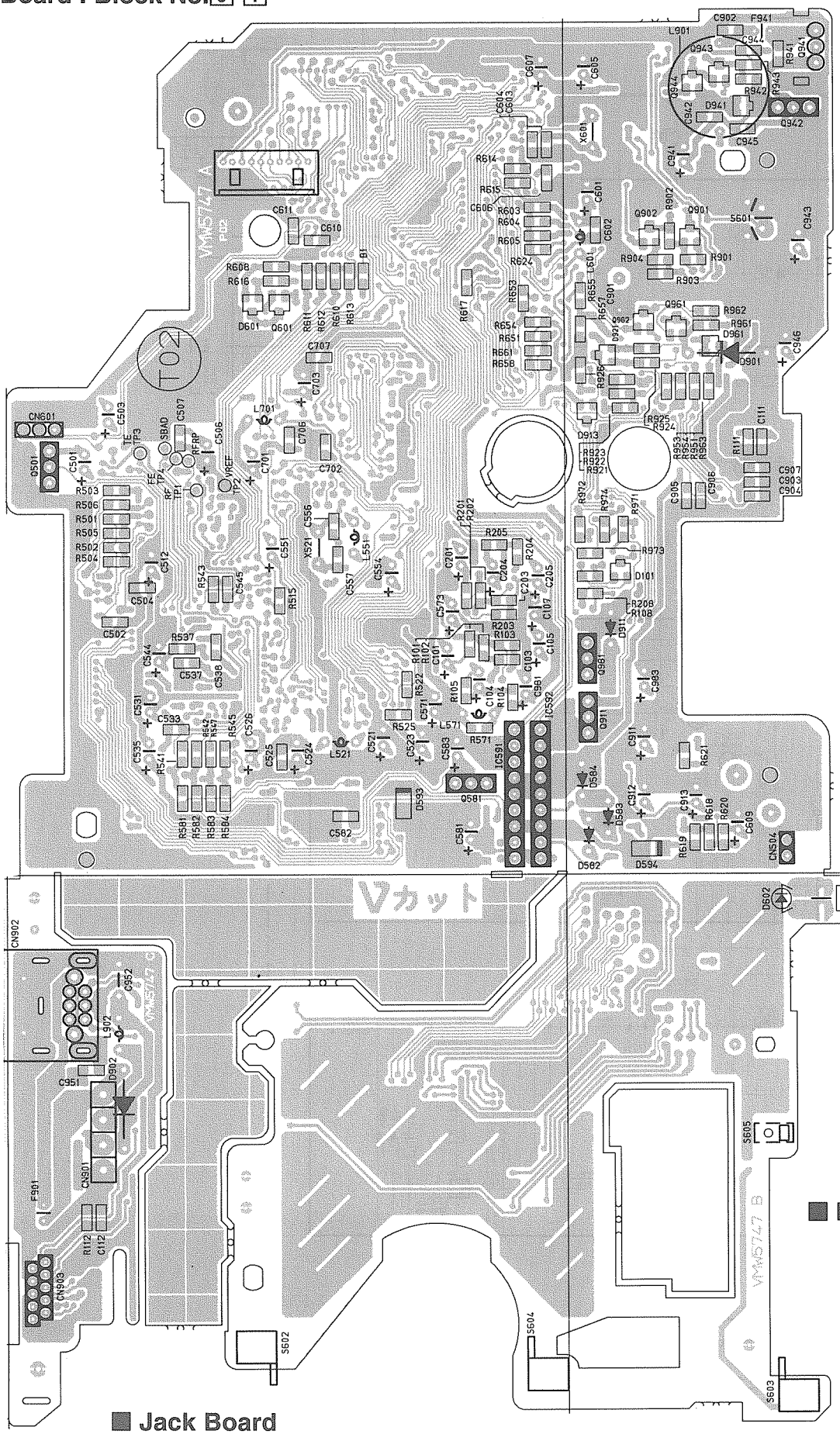
ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(uF)/RATED VOLTAGE(V)

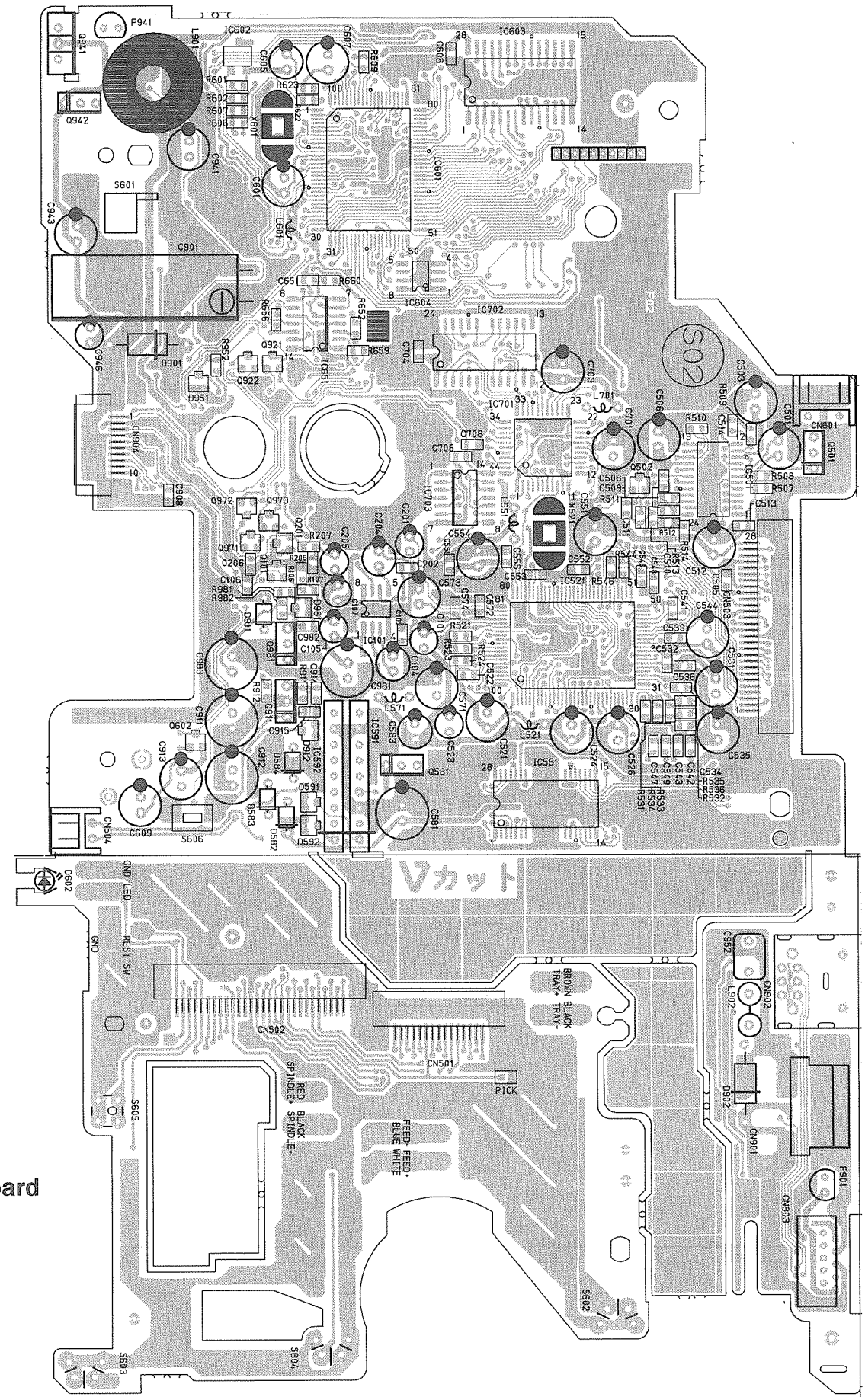
Printed Circuit Board

■ Main Board : Block No. 0 1

(Revarse Side)



(Forward Side)



sm Board

D E F G H

PARTS LIST

[CH-X1200]

* All printed circuit boards and its assemblies are not available as service parts.

Area Suffix

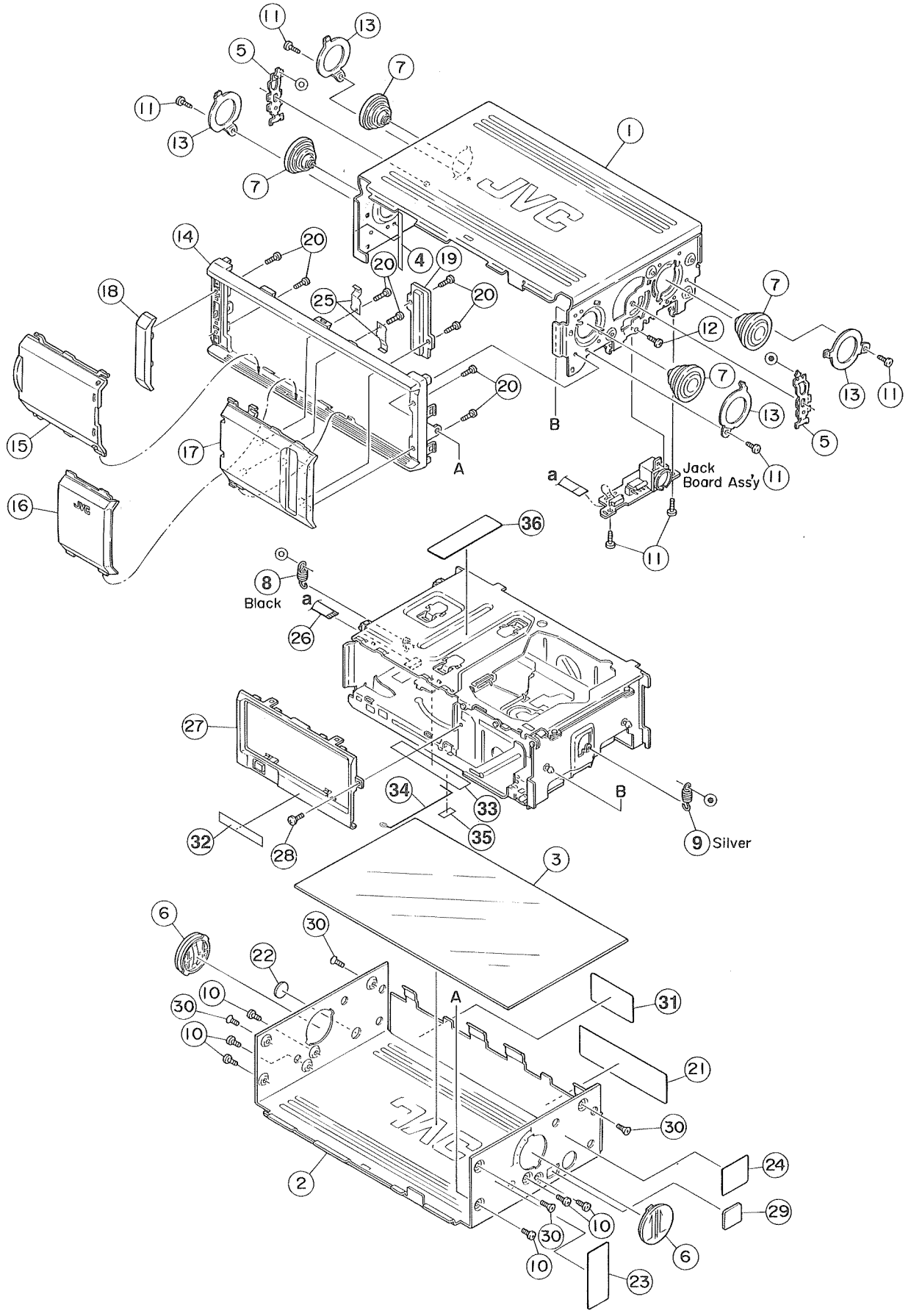
E ..... Continental Europe
J ..... U.S.A.
U ..... Other Areas

- Contents -

Exploded View of General Assembly and Parts List 3-2
Exploded View of CD Changer Mechanism and Parts List 3-4
Electrical Parts List 3-7
Packing Materials and Accessories List 3-10

General Exploded View and Parts List

Block No. M 1 M M



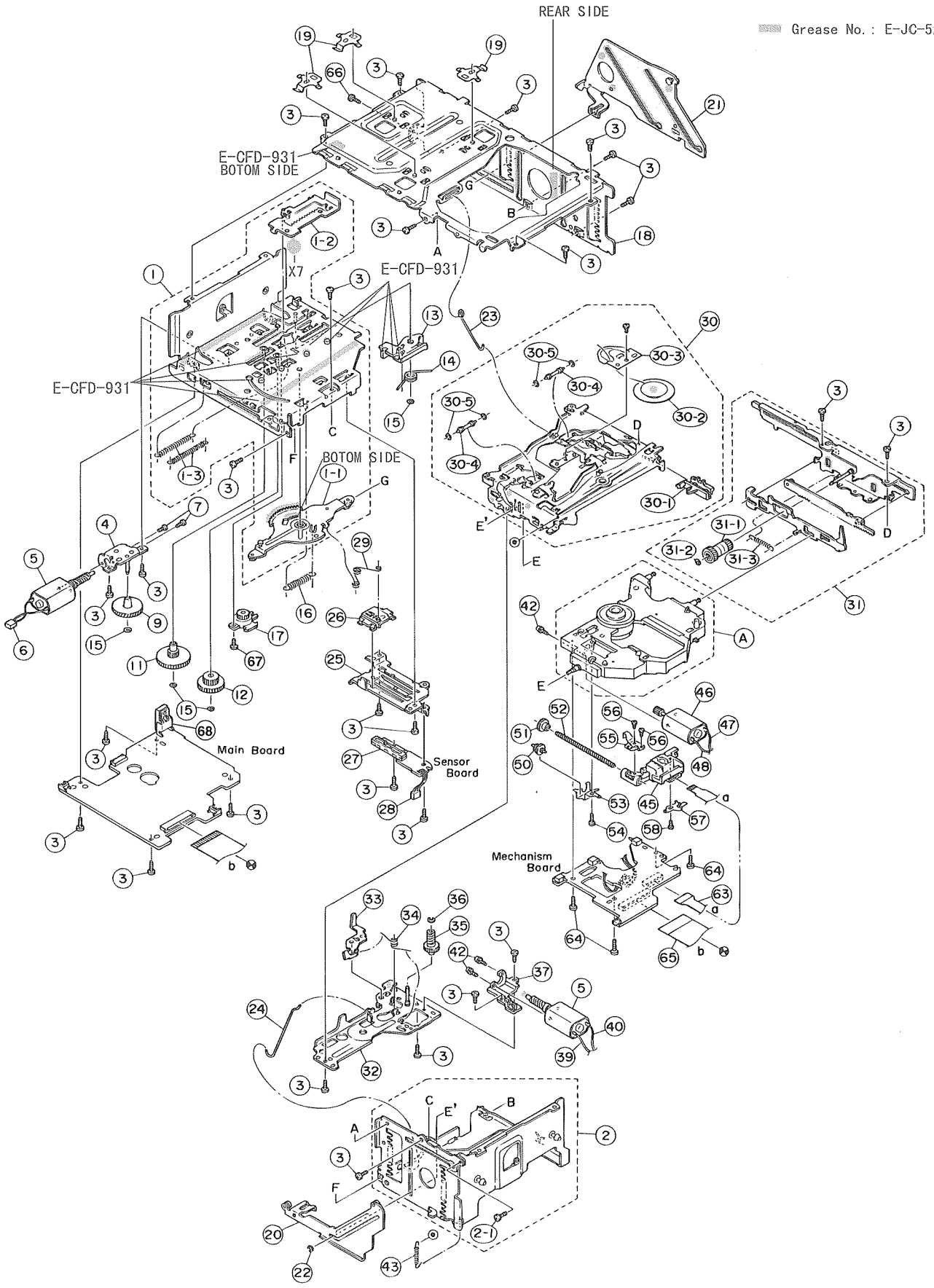
■ Parts List

BLOCK NO. M1MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	LV10040-001A-SL	TOP COVER		1		
	2	LV10041-001A-SL	BOTTOM COVER		1		
	3	LV30632-001A	INSULATOR		1		
	4	VYSH101-031	SPACER		1		
	5	LV40530-001A	BRACKET		2		
	6	LV30360-002A	DIRECTION KNOB	BOTTOM REAR SID	2		
	7	LV30451-001A	DAMPER		4		
	8	LV40345-001A	DAMPER SP(R)		1		
	9	LV40346-001A	DAMPER SP(L)		1		
	10	SDST2604M	SCREW		6		
	11	SDSR2004Z	SCREW		6		
	12	SDST2606Z	SCREW	8P+TOP	1		
	13	LV40529-001A	DAMPER BRACKET		4		
	14	LV10039-001A	FRONT PANEL		1		
	15	LV20061-001A	DOOR(1)		1		
	16	LV20062-002A	DOOR(2)		1		
	17	LV20063-002A	DOOR(3)		1		
	18	LV20064-001A	DOOR(4)		1		
	19	LV30145-001A	LED LENS		1		
	20	SDSF2006Z	SCREW		8		
	21	LV30577-002A	NAME PLATE		1	E	
		LV30577-001A	NAME PLATE		1	J	
		LV30577-001A	NAME PLATE		1	U	
	22	VYSS2R2-028	SPACER		1		
	23	LV40486-001A	CAUTION LABEL		1		
	24	LV40487-001A	CAUTION LABEL		1		
	25	LV40607-001A	HOLD BRACKET		2		
	26	QUQ110-1026AJ	FFC	CN904 TO CN903	1		
	27	LV20065-001A	FITTING		1		
	28	SDSR2004Z	SCREW		1		
	29	LV40528-001A	LABEL		1		
	30	QYSSST2605M	SCREW		4		
	31	VND4922-003	CAUTION LABEL	J	1	J	
		E70891-001	CLASS 1 LABEL		1	E	
	32	LV40639-002A	CAUTION LABEL		1		
	33	LV40620-001A	SHIELD PLATE		1		
	34	QUB130-08A3RL	WIRE		1		
	35	VYSA1R4-056	SPACER		1		
	36	E406709-001	LASER CAUTION		1	E	

CD Changer Mechanism Ass'y and Parts List

Block No. M 2 M M



■ Parts List

BLOCK NO. M2MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A	VDG1048-001MT1	T.MECHA ASS'Y		1		
	1	LV30146-002A	CHASSIS(L) UNIT		1		
	1-1	LV40123-002A	LIFT ARM ASSY		1		
	1-2	LV30098-002A	EJECT SLIDER		1		
	1-3	LV40126-001A	EJECT SPRING		2		
	2	LV30097-001A	CHASSIS(R) ASSY		1		
	2-1	SDST2004Z	SCREW		1		
	3	SDST2004Z	SCREW		27		
	4	LV40129-002A	MOTOR BKT ASS'Y		1		
	5	PPN13KA10C-SA5	MOTOR ASS'Y		2		
	6	WJM0017-001A	E-SI C WIRE C-F		1		
	7	SPSK2025M	MINI SCREW		2		
	9	LV40131-001A	WORM WHEEL(P)		1		
	11	LV40132-003A	THIRD GEAR		1		
	12	LV40133-003A	LIFTER GEAR		1		
	13	LV30100-001A	APLOCK ARM		1		
	14	LV40134-001A	M.LOCK SPRING		1		
	15	WDL163525-6	SLIT WASHER		4		
	16	LV40142-003A	LIFTER SPRING		1		
	17	LV40478-001A	EJECT DAMPER		1		
	18	LV10027-001A	TOP COVER		1		
	19	LV30101-002A	MAGAZINE SPRING		3		
	20	LV30448-001A	FRONT SLIDER AS		1		
	21	LV30449-001A	REAR SLIDER ASY		1		
	22	REE1500X	E.RING		1		
	23	LV40135-002A	ROD(U)		1		
	24	LV40136-002A	ROD(L)		1		
	25	LV30104-001A	SENSOR BRACKET		1		
	26	LV30105-001A	SENSOR HOLDER		1		
	27	QVY0002-B14	S V RESISTOR		1		
	28	WJM0017-002A	E-SI C WIRE C-F		1		
	29	LV40137-001A	SENSOR SPRING		1		
	30	LV20067-001A	LIFTER UNIT		1		
	30-1	LV30110-001A	HOOK		1		
	30-2	VKR3203-001	CLAMPER		1		
	30-3	VKL7938-001	CLAMPER GUIDE		1		
	30-4	VKS5587-002	DETECT ROLLER		2		
	30-5	VKZ4563-005	O RING		4		
	31	LV30148-002A	SIDE BKT UNIT		1		
	31-1	LV40148-001A	TRAY GEAR		1		
	31-2	WDL163525-6	SLIT WASHER		1		
	31-3	LV40190-002A	RETURN SP.(R)		1		
	32	LV40149-001A	LIFTER BKT(L) A		1		
	33	LV30119-001A	SWITCH LEVER		1		
	34	LV40151-002A	SWITCH SPRING		1		
	35	LV40152-001A	WORM WHEEL(T)		1		
	36	REE1500X	E.RING		1		
	37	LV30120-001A	T.MOTOR HOLDER		1		
	39	QUB540-10A2A2	WIRE(T.MOTOR)		1		
	40	QUB541-11A2A2	WIRE(T.MOTOR)		1		
	42	LPSP2004Z	SCREW		3		
	43	LV40474-001A	ELEVATOR SPRING		1		
	45	OPTIMA-720A1	CD PICK UNIT		1		
	46	FF050SK11170SA2	DC MOTOR ASS'Y		1		

BLOCK NO. M2MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	47	QUB456-04A2A2	WIRE(F.MOTOR)		1		
	48	QUB459-05A2A2	WIRE(F.MOTOR)		1		
	50	LV40155-001A	MIDDLE GEAR		1		
	51	LV40156-001A	S.S. GEAR		1		
	52	LV40157-001A	SCREW SHAFT		1		
	53	LV30122-001A	SHAFT HOLDER		1		
	54	VKZ4248-204	MINI TAP SCREW		1		
	55	LV30123-001A	RACK ARM		1		
	56	SPSK1722M	SCREW		2		
	57	LV30124-001A	P.S. SPRING		1		
	58	SPSH1414M	MINI SCREW		1		
	63	LV30450-002A	PICK FPC		1		
	64	SDST2006Z	SCREW		3		
	65	QUQ710-2814AJ	FFC		1		
	66	SDSP2606Z	SCREW		1		
	67	SDSR2006Z	SCREW		1		
	68	VKL7059-002	TR BRACKET		1		

■Electrical Parts List

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 101	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 102	NCS21HJ-821AY	C CAPACITOR	820PF 5% 50V	
	C 103	NCS21HJ-121X	C CAPACITOR	120PF 5% 50V	
	C 104	QERF0JM-476ZN	E CAPACITOR	47MF 20% 6.3V	
	C 105	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 106	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 111	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 112	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 201	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 202	NCS21HJ-821AY	C CAPACITOR	820PF 5% 50V	
	C 203	NCS21HJ-121X	C CAPACITOR	120PF 5% 50V	
	C 204	QERF0JM-476ZN	E CAPACITOR	47MF 20% 6.3V	
	C 205	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 206	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 501	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 502	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 503	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 504	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 505	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 506	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 507	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 508	NCB21HK-104	C CAPACITOR	.10MF 10% 25V	
	C 509	NCB21HK-104	C CAPACITOR	.10MF 10% 25V	
	C 510	NDC21HJ-270X	C.CAPA. C.M		
	C 511	NDC21HJ-270X	C.CAPA. C.M		
	C 512	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 513	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 514	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 521	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 522	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 523	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 524	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 525	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 526	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 531	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 532	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 533	NCS21HJ-470AY	C CAPACITOR	47PF 5% 50V	
	C 534	NCB21HK-153AY	C CAPACITOR	.015MF 10% 50V	
	C 535	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 536	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 537	NCB21HK-272AY	C CAPACITOR	2700PF 10% 50V	
	C 538	NCB21HK-472AY	C CAPACITOR	4700PF 10% 50V	
	C 539	NCB21HK-333AY	C CAPACITOR	.033MF 10% 50V	
	C 541	NRSA02J-ORONY	BUS WIRE I/M	5% 1/10W	
	C 542	NCB21HK-182AY	C CAPACITOR	1800PF 10% 50V	
	C 543	NCS21HJ-271AY	C CAPACITOR	270PF 5% 50V	
	C 544	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 545	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
	C 546	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
	C 547	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
	C 549	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
	C 551	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 552	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 553	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 554	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 555	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 556	NDC21HJ-100X	C.CAPA. C.M		
	C 557	NDC21HJ-100X	C.CAPA. C.M		
	C 558	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 571	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 573	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 574	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 581	QER41AM-227N	E CAPACITOR	220MF 20% 10V	
	C 582	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 583	QERF0JM-476ZN	E CAPACITOR	47MF 20% 6.3V	
	C 601	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 602	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 603	NCS21HJ-220AY	C CAPACITOR	22PF 5% 50V	
	C 604	NCS21HJ-220AY	C CAPACITOR	22PF 5% 50V	
	C 605	QERF0JM-476ZN	E CAPACITOR	47MF 20% 6.3V	
	C 606	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 607	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 608	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 609	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 610	NCB21HK-104	C CAPACITOR	.10MF 10% 50V	
	C 611	NCB21HK-104	C CAPACITOR	.10MF 10% 50V	
	C 651	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 701	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 702	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 703	QER40JM-107	E CAPACITOR	100MF 20% 6.3V	
	C 704	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 705	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 706	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 707	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 708	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 901	QEZ0338-228	E CAPACITOR	2200MF	
	C 902	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 903	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 904	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 905	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 906	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 907	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 908	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 911	QERF1CM-107ZM	E CAPACITOR	100MF 20% 16V	
	C 912	QERF1CM-107ZM	E CAPACITOR	100MF 20% 16V	
	C 913	QER41AM-107	E CAPACITOR	100MF 20% 10V	
	C 914	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 915	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 941	QER41AM-107	E CAPACITOR	100MF 20% 10V	
	C 942	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 943	QER41CM-476	E CAPACITOR	47MF 20% 16V	
	C 944	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 945	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 946	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 951	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 952	QFV41HJ-224	TF CAPACITOR	.22MF 5% 50V	
	C 982	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 983	QERF1CM-107ZM	E CAPACITOR	100MF 20% 16V	
	CN501	QGF1013F1-15X	FPC CONNE		
	CN502	QGF1013F1-28X	FPC CONNE		

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	CN503	QGF1013F1-28X	FPC CONNE		
	CN504	VMC0041-002	CONNECTOR		
	CN601	VMC0041-003	CONNECTOR		
	CN901	QGA3901F1-04	CONNECTOR		
	CN902	VMC0315-101	CONNECTOR		
	CN903	QGF1004F4-10	CONNECTOR		
	CN904	QGF1013F1-10X	FPC CONNECTOR		
	D 101	HSM2836C	DIODE		
	D 582	DSK10C-E	DIODE		
	D 583	DSK10C-E	DIODE		
	D 584	DSK10C-E	DIODE		
	D 591	MA3075/H/-X	ZENER DIODE		
	D 592	MA3075/H/-X	ZENER DIODE		
	D 593	RB160L-40-X	SB DIODE		
	D 594	RB160L-40-X	SB DIODE		
	D 601	HSM2838C	DIODE		
	D 602	SLR-342VR3F	LED		
	D 901	2A02	DIODE		
	D 902	2A02	DIODE		
	D 911	DSK10C-E	DIODE		
	D 912	MA3062(H)	ZENER DIODE		
	D 913	HSM2836C	DIODE		
	D 921	HSM2838C	DIODE		
	D 941	MA3100(L)	ZENER DIODE		
	D 951	MA3051(M)	ZENER DIODE		
	D 961	HSM2838C	DIODE		
	D 981	MA3091(M)	ZENER DIODE		
	F 901	ICP-N70	IC PROTECTER		
	F 941	ICP-N70	IC PROTECTER		
	IC101	BA15218F	IC		
	IC501	TA2109F-X	IC		
	IC521	TC9462F	IC		
	IC581	BA6898FP-X	IC		
	IC591	BA6956N	IC		
	IC592	BA6956N	IC		
	IC601	UPD78076YGF-W03	IC		
	IC602	PST600(G)X	IC		
	IC603	TC55257DFLL85EX	IC C.M		
	IC604	BR24C01AF-X	IC		
	IC651	TC74VHC126F-X	IC		
	IC701	SM5902AF	IC		
	IC702	KM44C4104CS-L6	IC		
	IC703	TC74VHC126F-X	IC		
	L 521	QQL244K-4R7Z	INDUCTOR		
	L 551	QQL244K-4R7Z	INDUCTOR		
	L 601	QQL244K-4R7Z	INDUCTOR		
	L 701	QQL244K-4R7Z	INDUCTOR		
	L 901	QQR0905-001	CHOKE COIL		
	L 902	VQZ0048-009	INDUCTOR		
	Q 101	2SD1048X7T-HL	TRANSISTOR		
	Q 201	2SD1048X7T-HL	TRANSISTOR		
	Q 501	2SB1322/RS/-T	TRANSISTOR		
	Q 502	2SC2412K/R/-X	TRANSISTOR		
	Q 581	2SB1322/RS/-T	TRANSISTOR		
	Q 601	DTC114EKA-X	TRANSISTOR		

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	Q 602	2SC2412K/R/-X	TRANSISTOR		
	Q 901	2SA1037K(R)-X	TRANSISTOR		
	Q 902	DTC114EKA-X	TRANSISTOR		
	Q 911	2SD1994A(R,S)TA	TRANRISTOR		
	Q 921	2SC2412K/R/-X	TRANSISTOR		
	Q 922	2SA1037K(R)-X	TRANSISTOR		
	Q 941	2SB941A(P,Q)	TR.		
	Q 942	2SD1994A(R,S)TA	TRANRISTOR		
	Q 943	DTA114EKA-X	TRANSISTOR		
	Q 944	DTC114EKA-X	TRANSISTOR		
	Q 961	2SA1037K(R)-X	TRANSISTOR		
	Q 962	DTC114EKA-X	TRANSISTOR		
	Q 971	2SA1037K(R)-X	TRANSISTOR		
	Q 972	2SC2412K/R/-X	TRANSISTOR		
	Q 973	2SA1037K(R)-X	TRANSISTOR		
	Q 981	2SD1994A(R,S)TA	TRANRISTOR		
	R 101	NRSA02J-273NY	MG RESISTOR	27K 5% 1/10W	
	R 102	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
	R 103	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
	R 104	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 105	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 106	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 107	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
	R 108	NRSA02J-682X	MG RESISTOR	6.8K 5% 1/10W	
	R 112	NRSA02J-470NYM	MG RESISTOR	47 5% 1/10W	
	R 201	NRSA02J-273NY	MG RESISTOR	27K 5% 1/10W	
	R 202	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
	R 203	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
	R 204	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 205	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 206	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 207	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
	R 208	NRSA02J-682X	MG RESISTOR	6.8K 5% 1/10W	
	R 501	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 502	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 503	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
	R 504	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 505	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 506	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
	R 507	NRSA02J-220NY	MG RESISTOR	22 5% 1/10W	
	R 508	NRSA02J-220NY	MG RESISTOR	22 5% 1/10W	
	R 509	NRSA02J-273NY	MG RESISTOR	27K 5% 1/10W	
	R 510	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
	R 511	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 512	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W	
	R 513	NRSA02J-682X	MG RESISTOR	6.8K 5% 1/10W	
	R 514	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 515	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 521	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 522	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 523	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 524	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 525	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 531	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 532	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	

BLOCK NO. 01

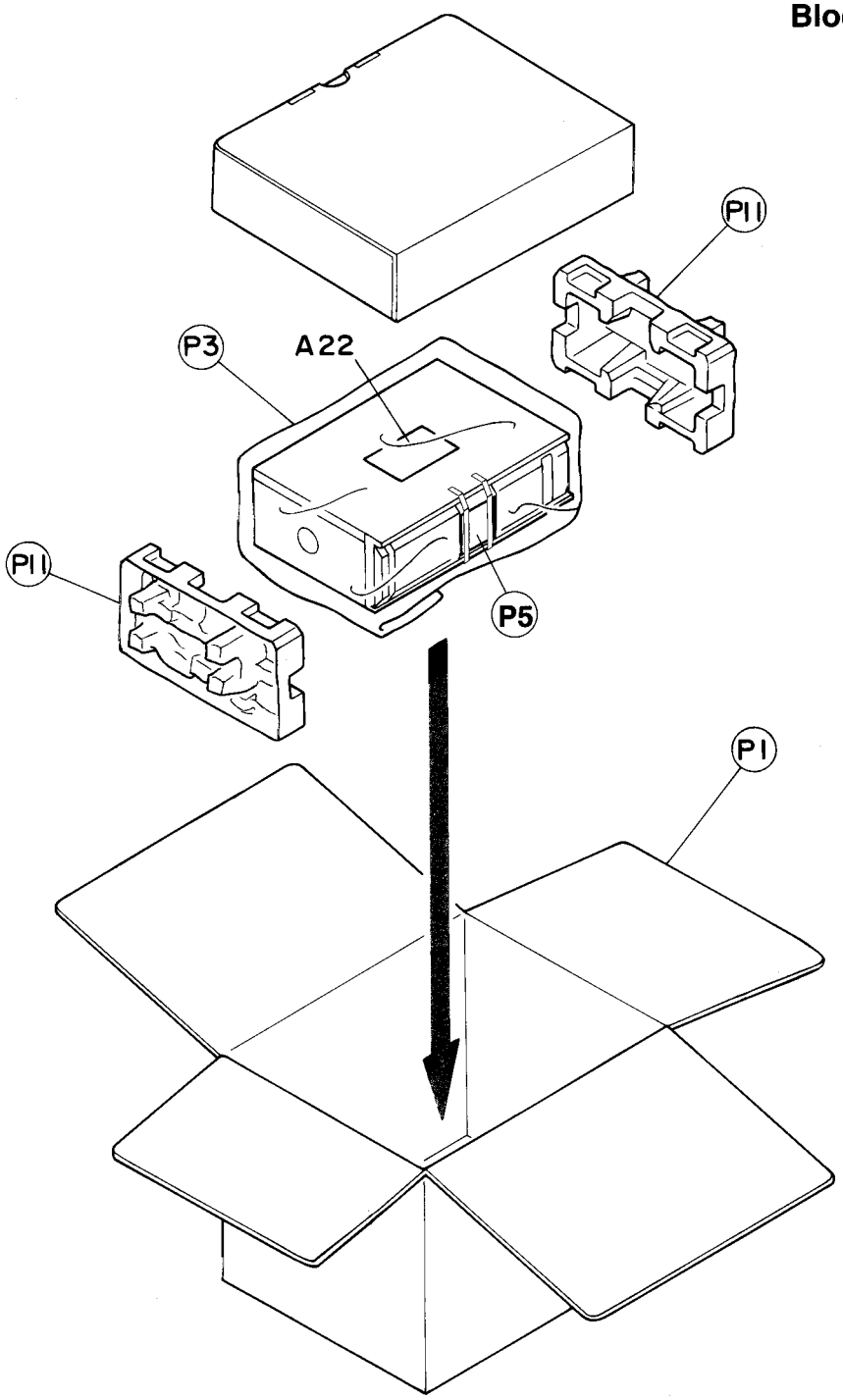
⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 533	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W	
	R 534	NRSA02J-474NY	MG RESISTOR	470K 5% 1/10W	
	R 536	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
	R 537	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 541	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
	R 542	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 543	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 544	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 545	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 547	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 571	NRSA02J-101NY	MG RESISTOR	100 5% 1/10W	
	R 581	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 582	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
	R 583	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 584	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 601	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 602	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 603	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 604	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 605	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 606	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 607	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 608	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
	R 609	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 610	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 611	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 612	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 613	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 614	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 616	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
	R 617	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 618	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 619	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 620	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
	R 621	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 622	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 624	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 651	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 652	NRSA02J-101NY	MG RESISTOR	100 5% 1/10W	
	R 653	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 654	NRSA02J-334NY	MG RESISTOR	330K 5% 1/10W	
	R 655	NRSA02J-101NY	MG RESISTOR	100 5% 1/10W	
	R 656	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 657	NRSA02J-334NY	MG RESISTOR	330K 5% 1/10W	
	R 658	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
	R 659	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
	R 660	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 661	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
	R 901	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 902	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
	R 903	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
	R 904	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
	R 911	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 912	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W	
	R 921	NRSA02J-273NY	MG RESISTOR	27K 5% 1/10W	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 923	NRSA02J-184NY	MG RESISTOR	180K 5% 1/10W	
	R 924	NRSA02J-682X	MG RESISTOR	6.8K 5% 1/10W	
	R 925	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 926	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 941	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W	
	R 942	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
	R 943	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 951	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
	R 953	NRSA02J-ORONY	BUS WIRE I/M	5% 1/10W	
	R 954	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 961	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 962	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 963	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
	R 971	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 972	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 973	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
	R 974	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 981	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 982	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	S 601	VSH1173-001	SWITCH		
	S 602	VSH1173-001	SWITCH		
	S 603	VSH1173-001	SWITCH		
	S 604	VSH1173-001	SWITCH		
	S 606	NSW0039-001X	TACT SW		
	X 521	VCX5016-934V	CRYSTAL		
	X 601	VCX5024-001	CRYSTAL		

Packing Materials and Accessories List

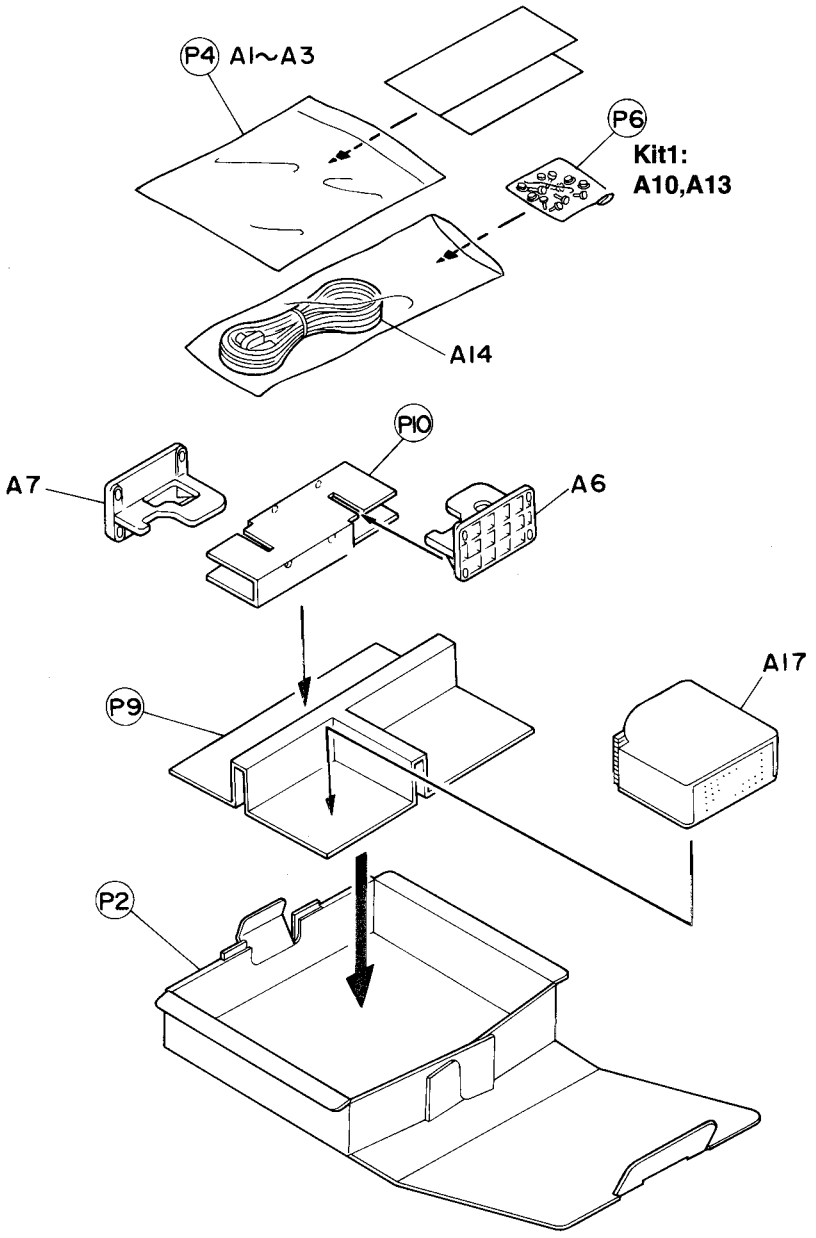
Block No. M 3 M M
Block No. M 4 M M



■ Packing parts List

BLOCK NO. M3MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	P 1	LV30452-001A	CARTON		1		
	P 2	LV30453-001A	ACCESSARY BOX		1		
	P 3	VPE3005-064	POLY BAG	FOR UNIT	1		
	P 4	QPA01703505P	POLY BAG		1	E,J	
		QPA01702505P	POLY BAG		1	U	
	P 5	VPK3001-013	SHEET		1		
	P 6	QPA00801205	POLY BAG	SCREW SA	1		
	P 9	LV30575-001A	SEPALATOR		1		
	P 10	LV30576-001A	SPACER		1		
	P 11	LV10057-001A	PAPER CUSHION		2		



■Accessories parts List

BLOCK NO. M4MM□□□

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A 1	LVT0128-002A	INSTRUCTIONS		1	E	
		LVT0128-003A	INSTRUCTIONS	E	1	E	
		LVT0128-004A	INSTRUCTIONS	E	1	E	
		LVT0128-001A	INSTRUCTIONS		1	J	
		VNN3870-631	INSTRUCT.BOOK		1	U	
	A 2	BT-52001-4	WARRANTY CARD		1	J	
		BT-51009-3	WARRANTY CARD	J	1	J	
		BT-54008-1	WARRANTY CARD		1	E	
	A 3	BT-20137	SVC CENTER LIST	J	1	J	
		BT-20071B	SVC CENTER LIST		1	J	
	A 6	LV20066-001A	MOUNT HOLDER(L)		1		
	A 7	LV20178-001A	MOUNT HOLDER(R)		1		
	A 10	SDSP4008Z	SCREW		4		
	A 13	VKZ4029-003	SCREW	M5 X 20	4		
	A 14	QAM0080-001	8P BUS-BUS CORD		1		
	A 17	LV30682-001A	MAGAZINE ASS'Y		1		
	A 22	LV40507-001A	INST SHEET		1		
	KIT 1	CHX99J-SCREW1	SCREW PARTS KIT	A10,A13	1		

CH-X1200

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